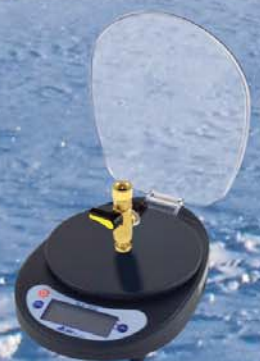


ELECTRONIC MEASUREMENT and CONTROL INSTRUMENTS



ELECTRONIC MEASUREMENT AND CONTROL INSTRUMENTS

1. " ITE " XTRA LEAK DETECTOR

The new ITE-XTRA offers every feature you've ever wished for in a halogen leak detector. Innovative MPC circuitry with advanced digital signal processing which monitors the sensing tip 2000 times per second. This is a professional grade, contractor tough tool designed with reliability and sensitivity in mind and is backed by a 1 YEAR WARRANTY!

ITE-XTRA AUTOMATIC HALOGEN LEAK DETECTOR

FEATURES

- Detects all halogenated refrigerants CFC, HFC and HCFC.
- Certified to SAE J1627 for R134a, R12, R22.
- Microprocessor control with advanced digital signal processing.
- 35,5 cm (14") flexible, stainless probe. Tricolor visual display.
- Seven (7) levels of sensitivity provide an increase of up to 64x.
- Tactile keypad controls. Real time sensitivity adjustment.
- Battery test function with battery voltage indication.
- True mechanical pumping provides positive airflow through sensing tip.
- Mute feature included.
- Cordless and portable, operates on 2 "C" cell alkaline batteries (3V DC).
- Supplied in resistant carrying case.

SPECIFICATIONS

- Ultimate sensitivity: Less than 3 gr. (0.1 oz) / year for all halogen based refrigerants.
- Sensing tip life: Approx. 20 hours
- Operating temperature: 0°C to +52°C (30°F to +125°F)
- Battery life: approx. 30 hours normal use
- Duty cycle: continuous, no limitation
- Response time: instantaneous
- Reset time: one second
- Warm-up time: approximately 2 seconds

SPARE PARTS

ITE-XTRA-2 Maintenance kit (3 sensor tips and 3 tip protectors)



ITE-XTRA

2. " ITE " XTREME LEAK DETECTOR

XLD-6050 AUTOMATIC HALOGEN LEAK DETECTOR for CFC, HFC, HCFC including R134a and R404A. With a flexible probe 450 mm (18") long for access to motor compartments or other 'hard to reach' areas.

FEATURES

- Microprocessor controlled and advanced digital signal processing ability.
- Tricolour visual display
- Seven levels of sensitivity allowing to increase the sensitivity up to 64 times
- Touchpad controlled
- Real time sensitivity adjustment
- Battery condition indication
- Suitable for all halogenated refrigerants
- Reset touchpad on the probe handle to eliminate ambient influences at any time
- Equipped with mechanical pump to provide a positive and increased airflow through the sensor tip.
- Audio mute function
- Extendable coiled cord connection between the probe handle and instrument case for more convenient use
- Flexible, rubber protected stainless steel end probe, length 45 cm
- Supplied with rechargeable batteries and charger with interchangeable EU and UK electrical plugs.
- 2 year warranty



XLD-6050

3. " ITE " ELECTRONIC LEAK DETECTORS FOR OTHER GASES

Suitable for most combustible gases, including PROPANE, ISO-BUTANE and AMMONIA. All are suitable for use in Class 1, Group A, B,C and D (Hazardous locations)



ITE-8900A

ITE-8900A

MICRO-PUMP LEAK DETECTOR

Automatic combustible gas detector. Visual leak size indicator. Adjustable sensitivity. Sensitivity from **5 to 2000 PPM**. Suitable for gasoline, propane, Iso-butane, natural gas, ammonia (NH₃) and other compounds.

FEATURES

- Visual leak size indicator.
- High efficiency pump in probe handle reduces response time.
- Automatic warm-up time \pm 30 sec. Adjustable sensitivity.
- Cordless operation - power supply rechargeable two (2,4 V) Ni-cad batteries.
- Battery charge life: 4 hours - battery charger included.
- Low battery indicator. Response time: instantaneous.
- Duty cycle: continuous - no limitations.
- Operating temperature range: **0°C to +50°C**.
- Sensitivity for Iso-butane is **50 PPM**.
- Sensitivity see list below **Supplied with CE mark**.

APPLICATIONS

- Detect leaks in automobile exhaust and fuel systems.
- Detect leaks in liquid or gas fired heating systems.
- Safety checks at propane filling stations.
- Search for arson residue (detect accelerants).
- Detect fuel in marine bilges.
- Check fuel tanks before welding.
- Check manholes / sewers for safety.
- Check for cracked heat exchangers.
- Detect solvent residues.

REPLACEMENT PARTS

ITE-8806B

BATTERY CHARGER

4. UV LEAK DETECTION LAMP

UVL-50W

UV LAMP, 12V DC 50W, W.5.5DC JACK

FEATURES

- The lamp is fan cooled to lower the temperature and protect the operator from harm, and to extend bulb life when in use.
- The anti-erosion plastic and one-piece design ensures a durable product while maintaining a practical appearance.
- Compact size for easy use.
- The filter is made of highest grade material allowing stronger light output.

SPARE PARTS

UVL-BCQ

BATTERY CHARGER, 230V-50Hz
(1.5A-5 hours)

UVL-BCS

BATTERY CHARGER, 230V-50Hz
(0.5A-14 hours)

UVL-AC

SWITCHING ADAPTER to directly connect to the lamp, 100-240V, 50-60Hz, 1.5A

UVL-PBP

PORTABLE BATTERY PACK with bag, 12V, 7,2Ah

UVL-GLASS

UV PROTECTION GLASSES

UVL-240

UNIVERSAL A/C FLUORESCENT DYE 240 ml
(see page 195)

INJEC

SYSTEM INJECTOR (see page 39)

COI-20Z

COMPRESSOR OIL INJECTOR ADAPTER
(see page 39)



5. " ITE " HEATED DIODE PROFESSIONAL REFRIGERANT LEAK DETECTOR

ITE-H10PM PROFESSIONAL REFRIGERANT LEAK DETECTOR
EXCEEDS "SAE J1627" MOVING PROBE SPECS.

FEATURES

- Hand held/stationary all refrigerant leak detector.
- The most sensitive battery powered leak detector on the market today. New extended sensor life mode.
- Certified to meet SAE J1627 moving probe specifications.
- Auto-balance (auto zero) circuitry and 3 sensitivity ranges allow you to "WALK IN" on leaks without further adjustments.
- Suitable for any **CFC, HCFC, HFC** or blends.
- Supplied in resistant ABS casing. Made in the U.S.A.
- Power supply: lead acid battery including 220V adapter.
- Battery clamp or cigarette lighter adapter. **Supplied with CE mark.**

SPECIFICATIONS

SENSITIVITY: Small position: **14,2 gr/yr HFC -
1,5 gr/yr CFC and HCFC**
Medium position: **28,4 gr/yr HFC -
14,2 gr/yr CFC and HCFC**
Sensor Saver: **141,8 gr/yr HFC -
56,7 gr/yr CFC and HCFC**

REFERENCE LEAK: **± 12 gram/year R134a** (± 6 months life time)

POWER SUPPLY: **10 to 16 VDC** recharge circuit built in (Std 12V)

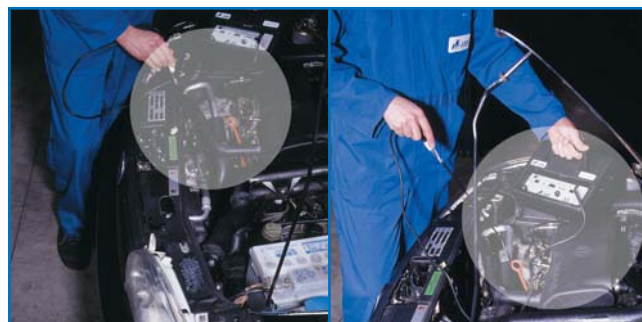
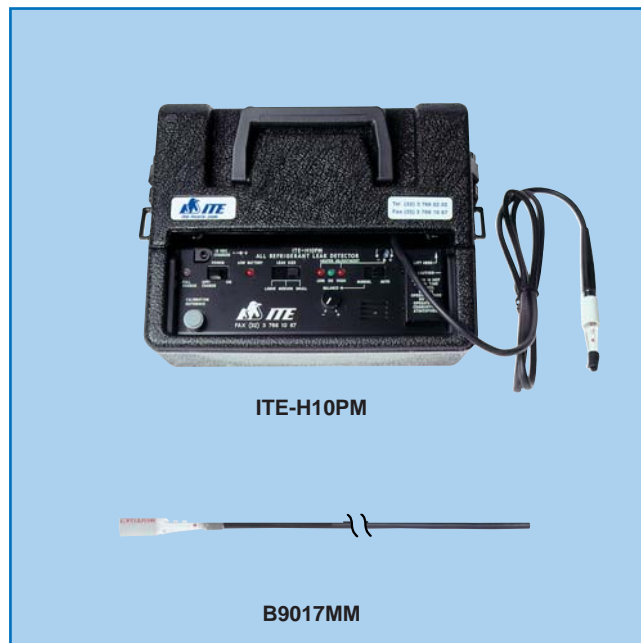
POWER OPTIONS: **220V AC Adapter** (Included)

12 VDC battery clamp adapter

Automotive **cigarette lighter adapter**

LOW BATTERY: Indicator light "ON" ± 5 min. before end

BATTERY LIFE: 1,5 hours (continuous) before recharging



6. " ITE " PORTABLE REFRIGERANT GAS ANALYZER

RA-500 REFRIGERANT ANALYSER

FEATURES

- RA-500 utilizes dispersive infrared (NDIR) technology to determine the weight concentrations of R12, R134a, R22, hydrocarbons and air.
- It also features exclusive "Blend-ID" analytical software, which quickly and accurately indicates the presence of EPA S.N.A.P. approved blend refrigerants.
- This instrument automatically determines if the purity of R12 and R134a refrigerant is at industry acceptable levels, eliminating potential for human error. Pure refrigerant is defined as a refrigerant that is 98% pure by weight or greater of either R12 or R134a.

SPECIFICATIONS

- Exceptionally portable design – goes anywhere you need to go
- Identifies EPA S.N.A.P. approved blends on large graphing display
- Versatile and easy-to-use
- Weight: 3,50 kg (8.0 lbs)
- Power requirements: 12-15V DC, Optional battery pack (Internal)
- Output: Digital display and LED's, optional Printer module
- Refrigerant: R12, R134a, R22, HC and EPA S.N.A.P. approved blends
- Resolution: 0.1%
- Operating humidity: 0-95% RH non-condensing
- Operating temperature: 5°C to 55°C (40°F to 130°F)
- Display: 128 x 64 Pixel Graphing
- Warranty: 1 year

RA-500P REFRIGERANT ANALYSER WITH BUILT-IN PRINTER

FEATURES

- Same specifications as above
- Printer module for on-the-spot receipt



" ITE " ELECTRONIC CHARGING & RECOVERY UNITS

WS-005

DIGITAL WEIGHING SCALE

FEATURES

- Maximum weight capacity: **5000 g**
- Accuracy: **0,5 g**
- Operating temperature: **15°C to 30°C**
- Batteries: **3 x AA**
- Low battery indication
- Auto power off (after 15 minutes without any change in weight, the scale will turn off. This auto off time of 15 min can be extended).
- Three display modes g, lb, oz
- Operates on 220 V
- **One year full instrument warranty**
- **Supplied with CE mark**

WS-005-1L-1/4

DIGITAL WEIGHING SCALE equipped with REFRIGERANT BOTTLE VALVE $\frac{1}{4}$ "

WS-005-1L-5/16

DIGITAL WEIGHING SCALE equipped with REFRIGERANT BOTTLE VALVE $\frac{5}{16}$ "

WS-005-1L-7/16

DIGITAL WEIGHING SCALE equipped with REFRIGERANT BOTTLE VALVE $\frac{7}{16}$ "

FEATURES

- Same as above

BVS-1L

REFRIGERANT BOTTLE VALVE $\frac{7}{16}$ " x $\frac{1}{4}$ " male flare SAE

BVS-1L-WS-005-1/4 SAE bottle + $\frac{1}{4}$ " SAE

REFRIGERANT BOTTLE VALVE $\frac{1}{4}$ " x $\frac{1}{4}$ " male flare SAE with core for WS-005

BVS-1L-WS-005-5/16 SAE bottle + $\frac{1}{4}$ " SAE

REFRIGERANT BOTTLE VALVE $\frac{5}{16}$ " x $\frac{1}{4}$ " male flare SAE with core for WS-005

BVS-1L-WS-005-7/16 SAE bottle + $\frac{1}{4}$ " SAE

REFRIGERANT BOTTLE VALVE $\frac{7}{16}$ " x $\frac{1}{4}$ " male flare SAE with core for WS-005

WS-055

COMPUTE CHARGING AND RECOVERY SCALE

FEATURES

- Designed for both charging and recovery. Can be used with **all** refrigerants and hydrocarbons
- **55 kg** (120 Lb) max capacity.
- Resolution selectable: **5 gr** / 0,2 oz / 0,010 lb
2 gr / 0,1 oz / 0,005 lb
- Accuracy: **± 0.01 %** of reading
- Control function (with or without optional valve module): the scale can be programmed to a desired weight, so that when this value is reached, the scale will sound a signal
- **9V** battery powers all functions
- Battery life approximately **60 hours** (30 hours when using optional valve)
- Three display modes: kg, lb or lb-oz
- Rugged removable platform with independent removable control module (including prop stand/hanging hook)
- Auto power off (after 15 minutes without any change in weight the scale will turn off. This auto off time of 15 min can be extended.)
- Possible to zero scale at any point
- Low battery indication
- Operating temperature: **0°C to +40°C** (32°F to +104°F).
- Level sight glass and adjustable feet for perfect level measurement
- Weight: **4,05 kg** (8.9 Lb) including carrying case
2,88 kg (6.4 Lb) scale only
- Carrying case dimensions: **430 x 330 x 100 mm** (17" x 13" x 4")
- Platform dimensions: **280 x 280 mm** (11" x 11")
- Supplied in tough ABS case
- **One year full instrument warranty**
- **Supplied with CE mark**

WS-005

BVS-1L-WS-005-1/4 SAE

WS-AC / USA / EU / UK



WS-055



WS-150 HIGH CAPACITY COMPUTE CHARGING SCALE

FEATURES

- Designed for both charging and recovery. Can be used with **all** refrigerants and hydrocarbons
- 150 kg** (330 Lb) max capacity.
- Resolution selectable: **20 gr** / 0,5 oz / 0,05 lb
10 gr / 0,5 oz / 0,02 lb
- Accuracy: ± 0.01 % of reading
- Control function (with or without optional valve module): the scale can be programmed to a desired weight, so that when this value is reached, the scale will sound a signal
- 9V** battery powers all functions
- Battery life approximately **60 hours** (30 hours when using optional valve)
- Three display modes: kg, lb or lb-oz
- Rugged removable platform with independent removable control module (including prop stand/hanging hook)
- Auto power off (after 15 minutes without any change in weight the scale will turn off. This auto off time of 15 min can be extended.)
- Possible to zero scale at any point
- Low battery indication
- Operating temperature: **0°C to +40°C** (32°F to +104°F).
- Level sight glass and adjustable feet for perfect level measurement
- Weight: **4,74 kg** (10.5 Lb) including carrying case.
- 3,56 kg** (8 Lb) scale only
- Carrying case dimensions: **430 x 330 x 100 mm** (17" x 13" x 4")
- Platform dimensions: **280 x 280 mm** (11" x 11")
- Supplied in tough ABS case
- Supplied with switching adapter with EU and UK plug model WS-AC-EU/UK
- Input: 100-240 VAC / 0.3A / 50-60 Hz
- Output: 9 VDC / 0.6A
- Cable length: 175 cm
- One year full instrument warranty**
- Supplied with CE mark**

WS-AC ADAPTER BODY

WS-AC-USA **USA PLUG** to be used on adapter body WS-AC

WS-AC-EU **EU PLUG** to be used on adapter body WS-AC

WS-AC-UK **UK PLUG** to be used on adapter body WS-AC

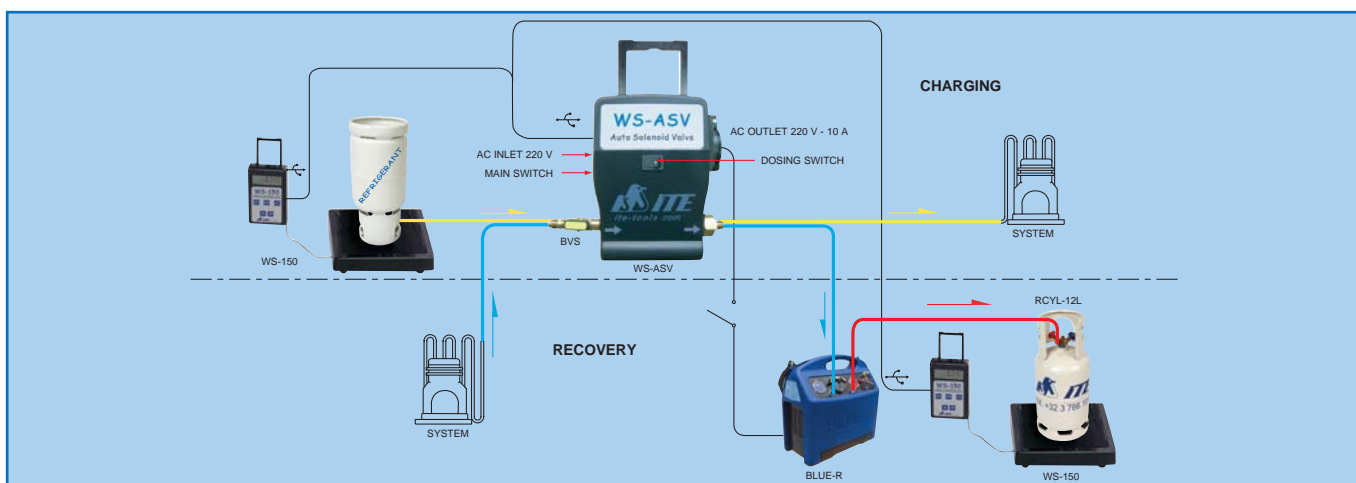


WS-ASV MODULE for WS-055 and WS-150

The WS-ASV in combination with the WS-150 or WS-055 weighing scale allows you to quickly dispense a preset amount of refrigerant into any air-conditioning or refrigeration system or cylinder.

SPECIFICATIONS

- Capacity
WS-055 -> 55 kg / 120 lbs
WS-150 -> 150 kg / 330 lbs
- Resolution / charge increments
2 gr / 0.1 oz / 0.005 lb <-> 5 g / 0.2 oz / 0.01 lb
10 gr / 0.5 oz / 0.02 lb <-> 20 g / 0.5 oz / 0.05 lb
- Compatible for all halogenated refrigerants including R134a and R410A.
- Power supply: 220 V, +/- 10 % - 50/60 Hz
- Accessory outlet rating: 10/16 A
- Weight: 1 kg
- Dimensions: 21 x 7,5 x 17,5 cm including fittings





MULTI-ELECTRONIC DIGITAL ANALYSERS

1. THERMO-ANEMOMETER

ITE-8060

THERMOMETER & ANEMOMETER

For AIR VELOCITY & TEMPERATURE TESTING

With user manual and battery

Complete unit with carrying case

FEATURES

- Sensitive and accurate (ultra low friction sapphire jewel bearing).
- Ergonomic and easy-to-use design.
- Read while measuring (up two metres remote vane).
- Large **17 mm (5/8") LCD Digits** (Liquid Crystal Display).
- Telephone coiled style cable for Vane: **2 metres**.
- Mounting nut for long extension.
- Low power consumption. Build in low indicator battery.
- Data hold function. Maximum hold for temperature.
- Vane dimensions: **66 x 133 x 30 mm**. Weight: **140 grams**.
- Meter dimensions: **88 x 168 x 27 mm**. Weight: **210 grams**.

SPECIFICATIONS

- Temperature sensor: "**K**" type thermocouple.
- Meter operating temperature: **0°C to +50°C** (+32°F to +122°F).
- Vane operating temperature: **0°C to +60°C** (+32°F to +140°F).
- Operating humidity: Less than **80%** (Relative Humidity).
- Operating pressure: **500 mbar to 2 bar**.
- Storage temperature: **-40°C to +60°C** (-40°F to +140°F).
- Power consumption: **6 mA** approx.
- Battery type: **9V** (50 hours life for 300 mA/hr).
- **AIR VELOCITY READINGS:**

m/s: metre per second
ft/min: feet per minute
knot: nautical miles per hour
Km/hr: kilometre per hour
mph: miles per hour

- **AIR SPEED MEASUREMENT AVERAGING PERIOD:**

m/s: 0.6 sec. (approx.).
ft/min: 1.2 sec. (approx.).
knots: 1.2 sec. (approx.).
Km/hr: 2.2 sec. (approx.).
mph: 1.4 sec. (approx.).

UNITS RANGE RESOLUTION THRESHOLD ACCURACY

m/s	0.0 to 45	0.1	0.3	± 3% or 0.1
ft/min	0 to 8800	10	60	± 3% or 10
knots	0.0 to 88	0.1	0.6	± 3% or 0.1
Km/hr	0.0 to 140	0.1	1.0	± 3% or 0.1
mph	0.0 to 100	0.1	0.7	± 3% or 0.1

TEMPERATURE RANGE READINGS:

UNITS	RANGE	RESOLUTION	ACCURACY
°C	0 to 60.0	0.1	± 0.8°C
°F	32.0 to 140.0	0.1	± 1.5°F



2. 5 IN 1 DIAGNOSTIC RESIDENTIAL METER

TAHL-5 THERMO-, ANEMO-, HUMIDITY, LIGHT METER

FEATURES

- 5 in 1 professional measuring instrument: Anemometer, Air Flow, Hygrometer, Thermometer and Light meter.
- Compact, lightweight, wristlet design for easy one hand operation.
- Low friction ball bearing mounted wheel design provides high accuracy at high and low air velocity.
- Exclusive photo diode and color correction filter light sensor, spectrum meets C.I.E. photopic.
- High precision thin film capacitance humidity sensor with fast response to the humidity changes.
- Standard type K thermocouple input jack suitable for all kind of type K probe.
- Built-in microprocessor circuit assures excellent performance and accuracy.
- Concise and compact button arrangement, easy operation.
- Memorizes the maximum and minimum value with recall.
- °C/°F selectable
- Lux/feet-candle selectable
- Air velocity measuring units selectable for five kind of units.
- Air flow (CFM, CMM) measurement can be set to the desired area dimension.
- Multi channel display for relative humidity and temperature measured values or air velocity and temperature measured values at the same time.
- Zero button design for light meter calibration.
- Hold function to freeze the current reading value.

SPECIFICATIONS

- Operating temperature: 0°C to 50°C (32°F to 122°F)
- Operating humidity: Max. 80% RH
- Power supply: 006P DC 9V battery (heavy duty type), included
- Power consumption: Approx. DC 6.2 mA
- Dimensions: 156 x 60 x 33 mm (6.14 x 2.36 x 1.29 inch)
- Weight: 160 g
- Soft carrying case
- TP-02A Temperature probe, type K, measuring range: -50°C to +900°C, dimensions: 10 cm tube, Ø 3,2 mm

ELECTRICAL SPECIFICATIONS

MEASUREMENT		RANGE	RESOLUTION	ACCURACY
Air velocity	ft/min	80 to 5,910 ft/min	1 ft/min	≤ 20 m/s: ± 3% F.S. > 20 m/s: ± 4% F.S.
	m/s	0.4 to 30.0 m/s	0.1 m/s	
	km/h	1.4 to 108.0 km/h	0.1 km/h	
	MPH	0.9 to 67.0 mile/h	0.1 MPH	
	knots	0.8 to 58.3 knots	0.1 knots	
	Temperature (thermister)	32 to 122°F 0 to 50°C	0.1°F 0.1°C	± 2.5°F ± 1.2°C

Air flow	CMM cubic meter/min	54,000 CMM	0.001 to 1 CMM
	CFM cubic feet/min	1,908,400 CFM	0.001 to 100 CFM

Humidity	% RH	10 to 95% RH	0.1 % RH	< 70% RH: ± 4% RH ≥ 70% RH: (± 4% rdg + 1.2% RH)
	Temperature (thermister)	32 to 122°F	0.1°F	± 2.5°F
		0 to 50°C	0.1°C	± 1.2 °C

Light	Lux	0 to 2,200 Lux	1 Lux	± 5% rdg ± 8 dgt
		1,800 to 20,000 Lux	10 Lux	
	Ft-cd	0 to 204.0 Fc	0.1 Ft-cd	
		170 to 2,000 Fc	1 Ft-cd	

Temperature (Type K)	-148 to 2,372°F	0.1°F	± (1% rdg + 2°F)
	-100 to 1,300°C	0.1°C	± (1% rdg + 1°C)

MEASUREMENT	AREA SETTING
CMM	0.001 to 30.000 square meter
CFM	0.01 to 322.92 square feet

REMARK:

ft/min: feet per minute	MPH: miles per hour
m/s: meters per second	knots: nautical miles per hour
km/h: kilometers per hour	Ft-cd: feet candle



3. TEMPERATURE, PRESSURE AND SUPERHEAT ANALYSER

SH-88A

SUPERHEAT CALCULATOR ANALYSER

Complete KIT with carrying case.

FEATURES

- Contains 16 programmed most common refrigerants used today: R11, R12, R22, R502, R134a, R404A, NH₃ (Ammonia), HCFC-123, HCFC-124, HCFC-125, AZ-20, AZ-50, HP-80, MP-39, MP-52, MP-66.
- **No more charts.**
- Automatically calculates superheat. Saves time and money.
- Independently measures temperatures (two points) and gauge pressure.
- Displays temperature differential independently. Eliminate duplication of instruments. Unit can be automatically zeroed to compensate for altitude and ensure permanent accuracy.
- Memory for storage and recall of "HI - LOW" temperature and pressure picks. Has auto shut-off to save battery life.
- Large LCD numerals with backlit display for use in low light.
- Optional battery eliminator to save battery and allow for long memory storage.
- Rugged polyethylene carrying case for unit and accessories.
- Contains diagnostic anomalies: "HI", "LO", "LOP".

SH-88A

4. SINGLE PROBE THERMOMETER

TM-99A

SINGLE PROBE THERMOMETER

With **9V DC** battery.

Temperature scale in **°C** and **°F**

Reading range: **-40°C** to **+150°C** max
(-40°F to +300°F)

FEATURES

- Same as **SH-66-AC** (shown below) but with only one **SH-1075** probe.
- Ambient temperature for use: **-23°C** to **+55°C** max (-10°F to +130°F)
- Dimensions: **180 x 80 x 25 mm** (W x H x D)
- See "SPARE PARTS" below for all "SH" available probes

SPARE PARTS

SH-1075

PUNCTURE PROBE: 120 cm, tip max +150°C

SH-2010

AIR and SURFACE PROBE: 365 cm, tip max +95°C

SH-4011

ALUMINIUM SURFACE PROBE

With snap-on elastic strap. 365 cm, tip max +100°C

SH-4040

FAST SURFACE CONTACT PROBE

120 cm, tip max +150°C

SH-5005

AIR PROBE with COIL CORD: 120 cm, tip max +150°C

SH-9010

EXTENSION CABLE of 3 m (9.8")

SH-9015

EXTENSION CABLE of 16 m (52")

SH-1075

TM-99A

5. MULTI-TEMPERATURE TESTER

SH-66-AC **MULTI-PROBE THERMOMETER** (Complete kit)
With **9V DC Battery**. With **SH-1075**, **SH-4011** and **SH-2010** probes. Selectable temperature scale in **°C** or **°F**. Reading range: **-40°C to +150°C max.** (-40°F to +300°F)

FEATURES

- Compact and strong hand-held unit.
- **10K** Thermistor sensors.
- Detachable 10K thermistor probes.
- Large **LCD DISPLAY BOARD** indicating:
 - LO** or **LLL** Temperature or open probe
 - HI** or **HHH** Temperature or short probe.
 - LO-P** Battery discharged. (°F) or (°C) selected board.
 - 1, 2 or 3 Zones** being monitored. Batteries included.
- Ambient temp. use from **-17°C** up to **+54°C** (0°F up to +130°F).
- Sealed membrane toughpad.
- Single keystroke operation.
- Timed shut-off. Light "ON" "OFF".
- (°C) and (°F) function key.
- Operation status on display.
- ABS plastic case.

SPECIAL FEATURES

- Detachable cover closed case.
- Temperature differential measurement function displays updated differential between probe 1 and probe 2. Three zones (1, 2 and 3) can be monitored.
- Probes **SH-1075**, **SH-4011** and **SH-2010** are supplied as standard.
- See "**SPARE PARTS**" below for all "SH" available probes.



6. DIGITAL HAND HELD THERMOCOUPLE THERMOMETER

HT-680A **SINGLE PROBE THERMOMETER**
With **9V DC battery**. Selectable temperature in **°C** or **°F**. Thermocouple puncture probe.

FEATURES

- Hand-held thermocouple digital temperature tester
 - Durable construction
 - Wide temperature ranges
 - Fast response time
 - 6 button sealed membrane key pad for
 - ON/OFF
 - °C or °F selection
 - memory high/low recall
 - probe type selection
 - backlight
 - memory clear
 - Stainless steel type J thermocouple puncture probe included
 - Allows the use of J, K, T, or E type thermocouple probes
 - Display: 4 digit backlit LCD, 10 mm (0.4") high
 - Temperature range depending on probe type and limited by specific probe range.
 - Temperature range for specific supplied J-type probe: -73°C to 482°C (-100 to 900°F)
 - Resolution: ± 0.1 °F or °C from -99.9 to 999.9°F
± 1.0 °F or °C from 1000 to 2200°F and -100 to -400°F
 - Accuracy: ± 0.5 °F or °C, or ± 0.3% of reading, whichever is greater (32 to 120°F)
 - Cold junction compensation: ±0.2 °F from -10°F to 103°F
 - Ambient range: -23°C to +54°C (-10 to 130°F)
 - Humidity range: 0% to 90% non-condensing
 - Displays **LO**: temperature is below probe range or open probe
HI: temperature is above probe range or shorted probe
LO-P: low battery indication
 - 9V battery included
 - Auto shut-off after 30 minutes of non operation
 - Dimensions: 178 x 76 x 25 mm (7" x 3" x 1")
 - Supplied in ABS plastic carrying case
- Available until depletion of our stock.





7. MULTI-TEMPERATURE AND RELATIVE HUMIDITY TESTER

SRH-77A **MULTI-PROBE THERMO-HYGROMETER** (complete)
With **9V DC Battery**. Temperature scale in **°C** or **°F**.
With **SH-1075**, **SH-4011** and **SH-5028** probes.

FEATURES

- Ambient temp. use from **-23°C** up to **+55°C** (-9°F up to +131°F).
- Same as SH-66-AC (page 11) and TM-99A (page 10) but with a **% indication of Relative Humidity** (LCD display board).
- Instantly calculates the wet bulb temperature.
- Reading range: **-40°C** to **+150°C** (-40°F to +300°F)
- See "SPARE PARTS" below for all "SH" available probes

SPARE PARTS

SH-1075 **PUNCTURE PROBE**: 120 cm, tip max +150°C
SH-2010 **AIR and SURFACE PROBE**: 365 cm, tip max +95°C
SH-4011 **ALUMINIUM SURFACE PROBE**
With snap-on elastic strap. 365 cm, tip max +100°C
SH-4040 **FAST SURFACE CONTACT PROBE**
120 cm, tip max +150°C
SH-5005 **AIR PROBE** with **COIL CORD**: 120 cm, tip max +150°C
SH-9010 **EXTENSION CABLE** of 3 m (9.8")
SH-9015 **EXTENSION CABLE** of 16 m (52")

8. DIGITAL INFRA-RED THERMOMETERS

IRT-7920 **INFRARED THERMOMETER WITH K-TYPE PROBE**

FEATURES

- IR with laser pointer or K-type thermocouple probe thermometer
- Hand-held, easy to operate
- °C/°F selectable
- Backlit LCD display
- Max/min readings
- Audible and visible Hi/Lo alarm function
- Data memory (50 sets of data) and read function.
- Over range indication (OL or -OL)
- Auto hold after IR measurement
- Auto power off function (IR: 10 sec. or continuous; K-type 30 min)
- Power supply: 1 x 9V battery included
- Low battery indication
- Battery life ±150 hours (laser pointer and backlight turned off)

SPECIFICATIONS IR

- Temperature range: **-20°C** to **+500°C** (-4°F to +932°F)
- Resolution **0,1°C** (0,2°F)
- Accuracy: **± 2%** of reading or **± 2°C** (4°F), whichever is greater (+ see temp. coefficient)
- Adjustable emissivity from 0,17 to 1 (preset at 0,95)
- Laser pointer 1mW (class 2)
- Optical reading ratio: **8:1** with a 25,4 mm (1") min target
- Spectral response: **6 to 14µm**

SPECIFICATIONS K-TYPE PROBE

- Temperature range: **-100°C** to **+1333°C** (-148°F to +1999°F)
- Resolution and basic accuracy: (at 23 ± 5°C calibration) accuracy is at 18 to 28°C with relative humidity up 80% (+ see temp. coefficient)

Function	Resolution	Range	Accuracy
°C	0.1°C	-100°C~0°C	±(0.2%rdg + 1.0°C)
		0°C~200°C	±(0.1%rdg + 1.0°C)
	1°C	200°C~1333°C	±(0.2%rdg + 2°C)
°F	0.1°F	-148°F~32°F	±(0.2%rdg + 2°F)
		32°F~200°F	±(0.1%rdg + 2°F)
	1°F	200°F~1999°F	±(0.2%rdg + 4°F)

- The basic accuracy does not include the probe-error

GENERAL

- Temperature coefficient: 0,1 x the applicable accuracy specification per °C from 0 to 18°C and 28°C to 50°C (32°F to 64°F and 82°F to 122°F)
- Response time: once per second
- Operating temperature: **0°C** to **+50°C** (+32°F to +122°F)
- Operating humidity: below 80% RH
- Storage conditions: **-10°C** to **+60°C** (+14°F to +140°F); below 70% RH
- Dimensions: **170 x 52 x 38 mm** (6,7 x 2,1 x 1,5")
- Weight: **180 gr**, with battery
- Supplied with 1 probe, battery, carrying case and instruction manual.



ITE-8909

NON-CONTACT INFRARED, GUN SHAPE THERMOMETER (probe not included)

FEATURES

- Non contact temperature measurement.
- Build-in type K thermometer.
- °C/°F display selectable.
- LCD display, easy readout.
- Microprocessor circuit assures maximum possible accuracy.
- Gun type, heavy duty & compact housing case.
- Records max. & min. readings with recall.
- Data hold.
- Auto shut off saves battery life.
- Battery: 9 V DC

SPECIFICATIONS

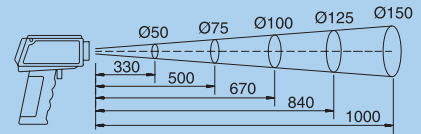
- Temperature readings: -10°C to +350°C (+14°F to +662°F).
- Resolution: 1°C. Sampling time: approx. 1 second.
- Accuracy: $\pm 2\%$ of reading or $\pm 2^\circ\text{C}$ ($\pm 3^\circ\text{F}$) whichever is greater.
- Operating temperature: 0°C to +50°C (+32°F to +122°F).
- Operating humidity: less than 80% RH.
- Emissivity adjustment from 0.1 to 0.95.
- Dimensions: 195 x 120 x 58 mm (7.7 x 4.7 x 2.3").
- Weight: 265 gr (0.6 Lbs).

SPARE PARTS

1052-MK

Needle probe

Diameter of spot (mm)



Distance to object (mm)



ITE-8909



9. PANEL MOUNT & POCKET THERMOMETERS

DM-120C

PANEL MOUNT THERMOMETER
With 1,5V DC solar battery

FEATURES

- Large stainless steel front flush mounting. **NSF Listed**.
- Remote sensor. Stainless steel case. Bright buffed flange.
- **50 mm** (2") diameter acrylic lens with **13 mm** (1/2") LCD.
- **1 metre** sensor cord.
- 3 x 4 mm (5/32") holes in flange equally spaced on pitch diameter of **33 mm** (1 5/16").
- Ambient temperature of use: **-10°C to +65°C** (+14°F to +150°F).
- Reading temperature range: **-40°C to +50°C** (-40°F to +300°F).

DM-120C



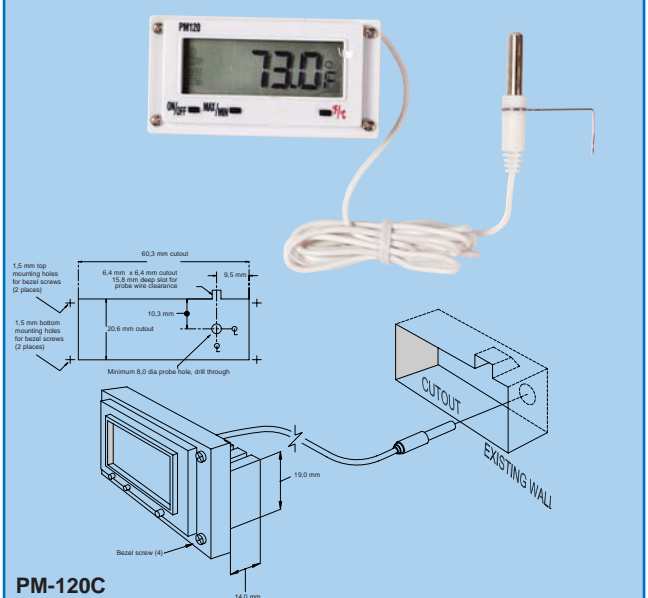
PM-120C

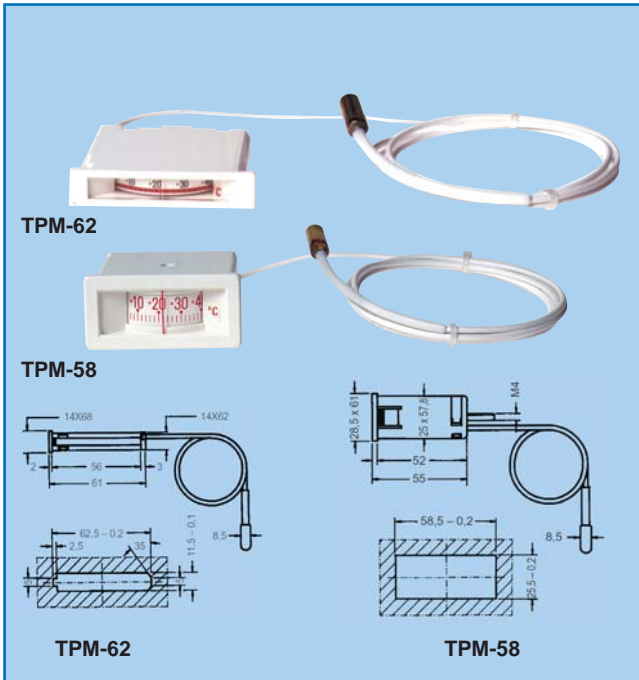
PANEL MOUNT PLASTIC THERMOMETER
With 1,5V DC battery.

FEATURES

- Rectangular remote reading thermometer ideal for use where mounting space is limited or where a plastic housing is preferred.
- White polystyrene body. ABS plastic probe with thermistor sensor in stainless steel tip.
- Remote sensor length: **1 metre** (39")
- **13 mm** (1/2") LCD display.
- **ON/OFF** button.
- **°C/°F** selection button.
- **MAX/MIN** button.
- Temperature range: **-40°C to +50°C** (-40°F to +122°F).
- Resolution: **0.1°C** (0.1°F)
- Accuracy: $\pm 1^\circ\text{C}$ from -20°C to +50°C ($\pm 1.8^\circ\text{F}$ from -4°F to +122°F)
 $\pm 2^\circ\text{C}$ below -20°C ($\pm 3.6^\circ\text{F}$ below -4°F)
- Response time: **30 seconds**
- Operating temperature: **-18°C to +50°C** (0°F to +120°F).
- **1,5V AA** battery included (battery life approx. 1 year)
- Dimensions: **69 x 36 x 28 mm** (2,7" x 1,4" x 1,1")
- Cutout for mounting: 60,3 x 20,6 mm (2,375" x 0,812")

PM-120C





TPM-62

PANEL MOUNT PLASTIC THERMOMETER

FEATURES

- Rectangular shape thin
- Shockproof ABS case
- Fixing system with moulded-in elastic tabs
- Shatterproof methacrylate ester glass cover
- Capillary length 1,5 meter plastic covered
- Temperature range: -40°C to +40°C

TPM-58

PANEL MOUNT PLASTIC THERMOMETER

FEATURES

- Rectangular shape depth 52 mm
- Shockproof ABS case
- Fixing system with moulded-in elastic tabs
- Glass cover retaining ring
- Shatterproof methacrylate ester glass cover
- Capillary length 1,5 meter plastic covered
- Temperature range: -40°C to +40°C

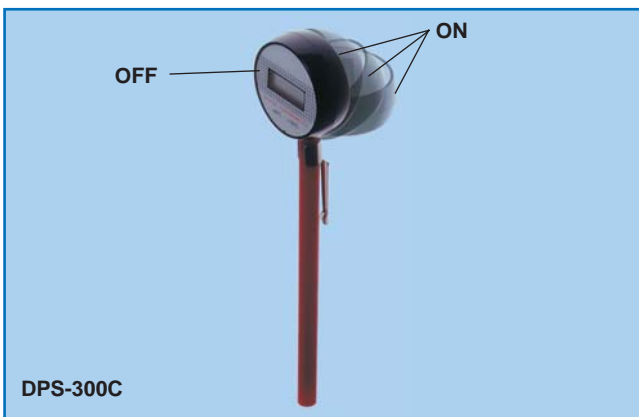


DT-1001C

HORIZONTAL WALL MOUNT THERMOMETER

FEATURES

- 1,2 m (48") wire sensor
- 114 x 29 x 16 mm
- Works by solar power and has an easy to replace battery to provide power once light level decreases (battery included)
- Temperature range: -40°C to +70°C



DPS-300C

DIGITAL ELECTRONIC SWIVEL HEAD POCKET THERMOMETER

Designed and ideal for use in air conditioning, Refrigeration, heating, automotive, etc...

FEATURES

- Never need calibration. Stainless steel probe.
- Battery life: **6 months**.
- **3 seconds** update.
- Swivel head orientable: 30°, 60° and 90°.
- Ambient temperature of use: -10°C to +40°C (+14°F to +104°F).
- Reading temperature range: -50°C to +150°C (-58°F to +302°F).



DGT-1415C

POCKET THERMOMETER

FEATURES

- Precision temperature instrument for refrigeration, air conditioning, food service, industrial, laboratory, automotive, general purpose
- 32 mm (1 1/4") diameter
- 127 mm (5") stainless steel stem with pocket clip case
- 2 push buttons (ON/OFF)
- Normal mode is 10 seconds per display
- **1 second** update when holding the "ON" button
- Temperature range: -50°C to +150°C
- Resolution: **0,1°C**
- Battery: 1 x 393 size 1.5V or equivalent (included)

10. POPULAR ALL PURPOSE THERMOMETERS

WT-389

WIDE RANGE THERMOMETER

With °C or °F selection, batteries and probe
WARRANTY: 6 months

FEATURES

- Digital thermometer with large LCD display
- **120 mm** stainless steel probe included
- Temperature range: **-50°C to +260°C** (-58°F to +500°F)
- Ambient operating temperature: **0°C to +50°C** (+32°F to +122°F)
- Resolution: **0.1°C to 0.5°C** (0.2°F to 0.5°F)
- Accuracy: **± 0,5°C**
- Min/max memory function
- Hi and Lo temperature alarm setting
- 2 seconds or 10 seconds selectable sampling cycle
- Count down timer function up to 99 h 59 min, with audio signal
- Selectable auto power off function (± 6 min)
- Low battery indication
- Power supply: 2 "AAA" size 1.5V DC batteries included
- Soft pouch included
- Dimensions: 70 x 170 x 29.5 mm (W x H x D)

SPARE PART

WT-389/P

TEMPERATURE PUNCTURE PROBE

(Already supplied with the WT-389 Unit)



WT-389

ITE-8030

DIGITAL THERMOMETER

With °C or °F selection

FEATURES

- Temperature range: **-46°C to +1300°C** (-50°F to +1999°F).
- Type **"K"** thermocouple.
- Resolution: **1°C** (1°F).
- Ambient operating temperature: **0°C to +50°C** (32°F to 122°F).
- Ambient operating humidity: **0% to 90%** (at 0°C to 35°C),
0% to 70% (at 35°C to 50°C).
- Accuracy: -50°C to +1000°C: 0,3% ± 1°C.
1000°C to 1300°C: 0,5% ± 1°C.
- Dimensions: **72 x 135 x 31 mm** (W x H x D).
- Low battery indication.
- Data hold function.
- Differential temperature measurements.
- Weight: **206 gr** (7,2 oz).
- See below for all **"MK"** available probes.



ITE-8030

Probe no.	Probe description (Type mini K)	Max tip temp	Max cord wire temp	Cord Length	Cord type	Response time in sec
1052-MK	Needle probe	482°C	105°C	0,9 m	PVC straight cord	3



DT-1630

HAND HELD & POCKET DIGITAL THERMOMETER

With **"HI-LOW"** programmable alarm function
With **°C** or **°F** selection, battery and probe
WARRANTY: **6 months**

FEATURES

- Temperature range: **-50°C** to **+300°C** (-58°F to +572°F).
- Read out in Celsius (°C) or Fahrenheit (°F).
- Switch for read out with **1 second** or **15 second** intervals.
- Soft cable with probe: **100 cm** long.
- Stainless steel probe: **10 cm** long (with tip protector).
- Retractable desk stand.
- Resolution: **0.1°C** (0.1°F).
- Alarm sounds when temperature reaches **"HIGH"** or **"LOW"** values as pre-selected.
- Dimensions: **59 x 107 x 20 mm** (W x H x D).



DTH-1628

HAND HELD & POCKET DUAL DIGITAL THERMO-HYGROMETER (°C & °F)

Displays indoor and outdoor temperatures and indoor relative humidity simultaneously.
WARRANTY: **6 months**

FEATURES

- Temp. measuring range (unit: indoor sensor) **0°C** to **+50°C** (+32°F to +122°F).
- Temp. measuring range (probe: outdoor sensor) **-50°C** to **+70°C** (-58°F to +158°F).
- Operation temperature: **0°C** to **+50°C** (+32°F to +122°F).
- Relative humidity: **25%** to **95%** at **+25°C** (+77°F).
- Resolution of temperature: **0.1°C** (0.1°F).
- Resolution of humidity: **1%** (Relative Humidity).
- Selection of Celsius (°C) or Fahrenheit (°F) by slide switch.
- Relative humidity measurement is temperature-compensated.
- **"WET"** Indicator: **Over 65%** of Relative Humidity.
- **"DRY"** Indicator: **Below 45%** of Relative Humidity.
- Wall mounting feature.
- Dimensions: **80 x 179 x 20 mm** (W x H x D).



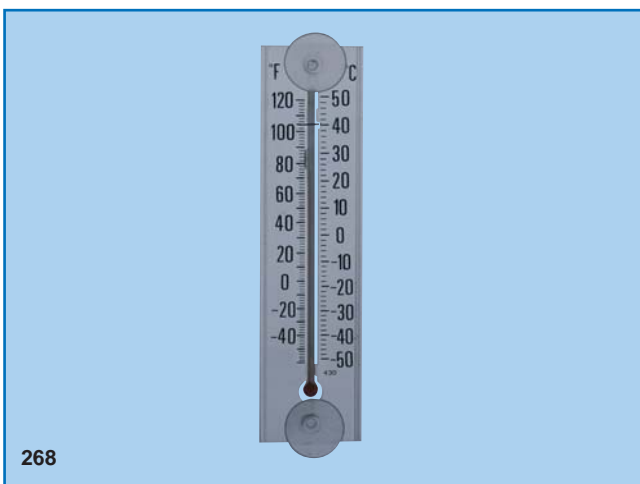
SP-120

SOLAR POCKET POWER THERMOMETER

Switchable in Celsius (°C) or Fahrenheit (°F)
WARRANTY: **6 months**

FEATURES

- Operates by using ambient light sources.
- Battery: **1.5V DC** Back up.
- Measuring range: **-50°C** to **+70°C** (-58°F to +158°F).
- Resolution: **0.1°C**
- Accuracy: **± 1.5°C**



268

WEATHER THERMOMETER

FEATURES

- Non-toxic spirit-filled glass tube
- Clear polystyrene backing
- Black printing
- Two suction bowls
- Temperature range: **-40°C** to **+50°C** (-40°F to +120°F)
- Accuracy: **± 1°C** (± 2°F)
- Dial: **195 x 50 mm** (7.7" x 2")
- Weight: **74 gr** (2.6 oz)

WDT-128-BODY	WIRELESS DIGITAL TEMPERATURE UNIT body only
WDT-128R	WIRELESS DIGITAL TEMPERATURE UNIT with 1 remote sensor
WDT-128C	WIRELESS DIGITAL TEMPERATURE UNIT with 1 remote sensor and extended cable
RS-128R	REMOTE SENSOR UNIT
RS-128C	REMOTE SENSOR UNIT with extended cable of 3 metres. WARRANTY: 6 months

FEATURES

MAIN UNIT

- Wireless temperature data transfer from remote sensor unit.
- Wireless transfer: **433 MHZ** frequency (UK: **418 MHZ**)
- Memory for min/max temperature
- Temperature alarm for every channel
- Resolution: **0.1°C**
- Measuring range for main unit (indoor): **-5°C to +50°C**
- Switchable from °C to °F
- Table stand, wall mount feature
- Incl. 2 AA batteries, 1,5 V
- Dimensions: **117 x 107 x 18 mm**. Weight: 179 gr

The main unit can be extended with maximum 3 remote sensor units.

REMOTE SENSOR UNIT

- Measuring range: **-20°C to +60°C**
- Water resistant remote sensor unit with LCD and LED indicator
- Data transfer: every 30 seconds
- Range depends on fabric and location: 20 m to 40 m
- Incl. wall mount feature
- Incl. 2 AA batteries, 1,5 V
- Dimensions: 91 x 59 x 20 mm. Weight: 78 gr



PT-100	DIGITAL POCKET SURFACE THERMOMETER For an easy and permanent professional use WARRANTY: 6 months.
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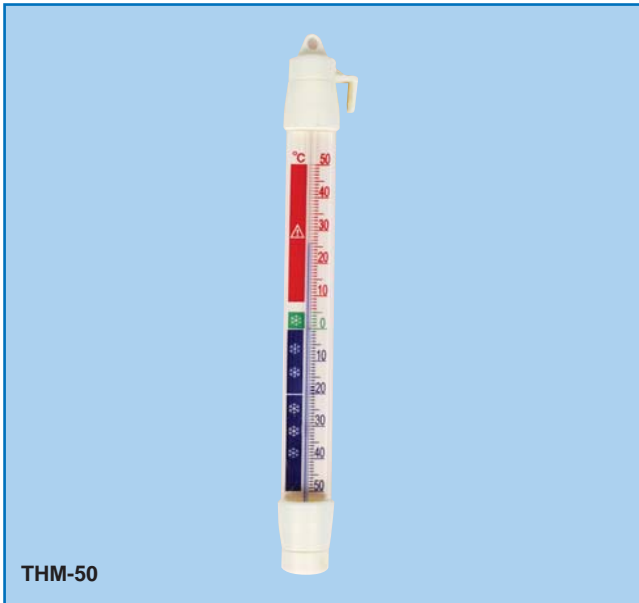
FEATURES

- Measures temperature of evaporator plate and condensing temperatures
- Measures air inlet, outlet and surrounding air
- Provides fast response - within seconds

SPECIFICATIONS

- Measuring range: **-40°C to +120°C**
- Ultra sensitive air and surface reading probe
- Large LCD display - 7/16" high, 3 1/2 digits
- Durable hi-impact case but still lightweight
- Battery operated: one 9V battery
- Temperature hold switch
- Accurate within **2/10° surface, 1° air**
- Resolution: **0,1°C**
- Dimensions: **38 x 170 x 22 mm**



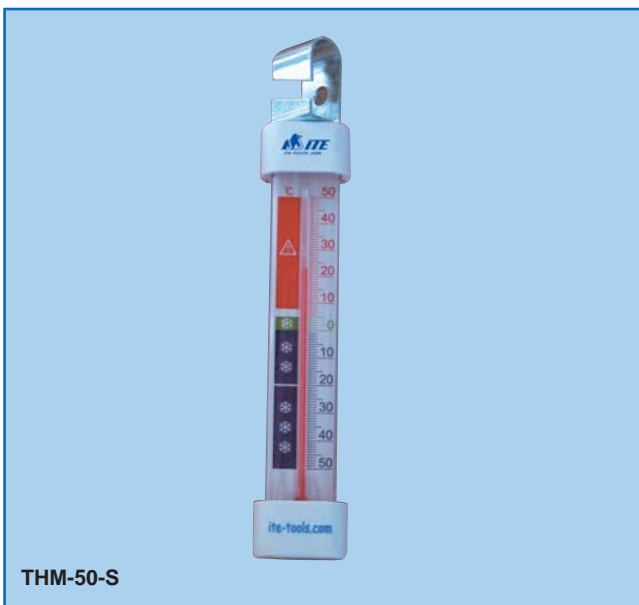


THM-50

REFRIGERATOR & FREEZER THERMOMETER WARRANTY: 6 months

FEATURES

- Thermometer with rotatable hook for placement inside refrigerators or freezers.
- Dial has 3 temperature zones with symbols indicating:
 - the temperature range for refrigerators
 - the ** storage temperature for freezers (for storage over a medium period of time)
 - the frost zone *** storage temperature for freezers (for storage over an extended period of time)
- 1°C increments
- Reading temperature range: -50°C to +50°C
- Dimensions: 210 mm x Ø 17 mm



THM-50-S

REFRIGERATOR & FREEZER THERMOMETER WARRANTY: 6 months

FEATURES

- Non-toxic spirit-filled glass tube completely enclosed.
- Hangs or may be permanently mounted.
- Dial has 3 temperature zones with symbols indicating:
 - the temperature range for refrigerators
 - the ** storage temperature for freezers (for storage over a medium period of time)
 - the frost zone *** storage temperature for freezers (for storage over an extended period of time)
- 1°C increments
- Reading temperature range: -50°C to +50°C
- Dimensions: 16 x 94 x 8 mm rectangular frame.



THM-5025-H

REFRIGERATOR & FREEZER THERMOMETER WARRANTY: 6 months

FEATURES

- Non-toxic liquid filled glass tube and magnifying acrylic lens.
- Unit is completely enclosed and hangs or stands.
- Dial has 3 temperature zones with symbols indicating:
 - the temperature range for refrigerators
 - the ** storage temperature for freezers (for storage over a medium period of time)
 - the frost zone *** storage temperature for freezers (for storage over an extended period of time)
- 1°C increments
- Reading temperature range: -50°C to +25°C
- Dimensions: 31 x 123 mm rectangular aluminium frame.

CST-080	SURFACE SPRING THERMOMETER from -40°C to +80°C
CST-120	SURFACE SPRING THERMOMETER from -10°C to +120°C

FEATURES

- Provides fast and accurate temperature readings of pipes with diameters between **12,7 mm** (1/2") and **100 mm** (4")
- °C temperature scale
- **63 mm** (2.5") stainless steel case
- Glass window
- Accuracy: **± 2°C**
- Flexible steel spring fastening

CMT-080	SURFACE MAGNET THERMOMETER from -40°C to +80°C
CMT-120	SURFACE MAGNET THERMOMETER from -10°C to +120°C

FEATURES

- Ideal for use on bearings, ovens, pipes, engines, tanks, dies, moulds or any other flat metallic surface
- °C temperature scale
- **63 mm** (2.5") stainless steel case
- Glass window
- Accuracy: **± 2°C**
- Dual magnets



CIT-080S	INDUSTRIAL THERMOMETER straight stem, from -40°C to +80°C
CIT-120S	INDUSTRIAL THERMOMETER straight stem, from -10°C to +120°C

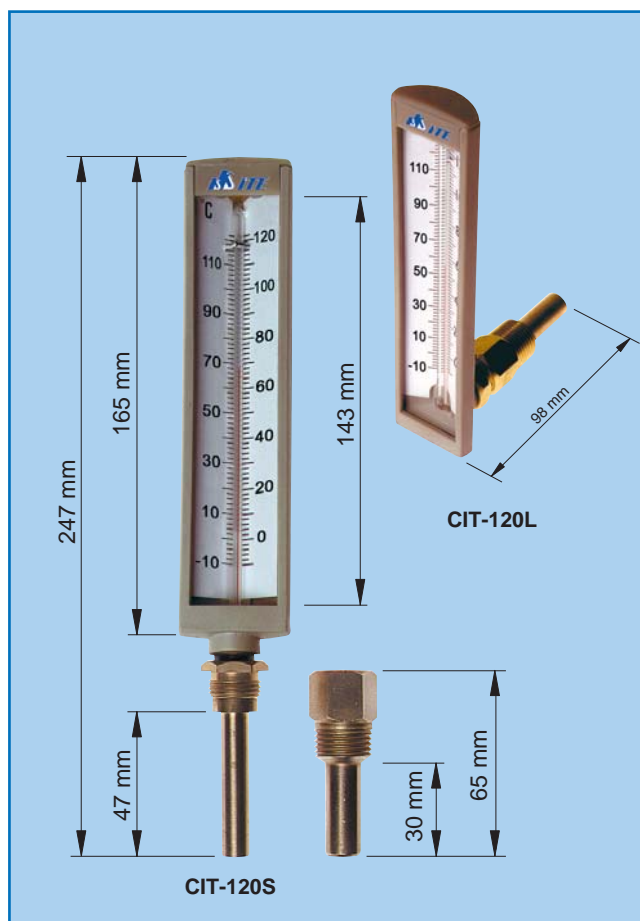
FEATURES

- Economical socket connected thermometer for use in small pipelines, tanks and other pressurized systems
- **165 mm** grey plastic case
- °C temperature scale
- Glass lens
- 100% mercury free
- Accuracy: **± 2°C**
- **47 mm stem** with swivel nut to mount into socket
- Socket with **1/2" MPT** connection to be fitted on system

CIT-080L	INDUSTRIAL THERMOMETER angled stem 90°, from -40°C to +80°C
CIT-120L	INDUSTRIAL THERMOMETER angled stem 90°, from -10°C to +120°C

FEATURES

- Economical socket connected thermometer for use in small pipelines, tanks and other pressurized systems
- **165 mm** plastic case
- °C temperature scale
- Glass lens
- 100% mercury free
- Accuracy: **± 2°C**
- **47 mm stem** with swivel nut to mount into socket
- Socket with **1/2" MPT** connection to be fitted on system





11. TEMPERATURE RECORDERS

CR4-220	TWO PEN RECORDER without sensor
CR4-220/KTH	TWO PEN RECORDER with temperature / humidity probe
CR4-220/KTT	TWO PEN RECORDER with dual temperature probe
CR4-220/KTP	TWO PEN RECORDER with temperature / pressure probe
CR4-220/KPP	TWO PEN RECORDER with dual pressure probe
CR4-220/KTH	TWO PEN RECORDER with temperature / event probe

FEATURES

- Two pen, remote reading, chart recorder
- Recordings are displayed digitally as well as on paper chart
- Offers numerous measurement applications when connected with one of our 5 plug-in probes (not included)
- Recorder automatically recognizes and controls whichever probes are attached
- All functions are managed through simple menus and shown on a backlit alphanumeric LCD display (16 characters x 2 lines)
- Touch pad provides simple operation
- Advanced micro controller design for precise measurement and reliable operation
- All settings retained during power off and power loss, no need to restore settings after power failure
- Battery backup, 8 x AA alkaline batteries (48h continuous use), to continue operation during power failure (batteries not included)
- 12 volt operation allows use in vehicle or marine applications (adapter not included)
- Two independent channel alarms give an audible alarm + relay
- Probe is field replaceable and calibrated with no special equipment
- Free standing or wall mounted + fold away carrying handle

SPECIFICATIONS

- Ambient operating temperature: **0°C to +49°C** (+32°F to +120°F)
- °C or °F selectable
- Chart rotation speed, selectable: **1.5, 3, 6, 12 and 24 hours, 7 and 31 days**
- Chart rotation mode, selectable: continuous or single turn
- Chart speed accuracy: **± 1%**
- Chart diameter: **152 mm (6")** (60 assorted charts supplied)
- Temperature alarm range: **-30°C to +50°C** (-20°F to +120°F)
- Relative humidity alarm range: **0 to 100% RH**
- Pressure alarm range: **0 to 35 bar** (0 to 500 Psi)
- Selectable alarm delay (No delay, 10 min, 30 min, 1h, 2h) to prevent nuisance alarms
- Remote alarm connection: normally open contacts **48 VAC/DC, 0.1 A** resistive load
- **220-240VAC - 50/60Hz** adapter included
- Dimensions: **185 x 70 x 235 mm** (7.25" x 2.75" x 9.25").
- Weight: **1.13 kg** (2.5 lb)
- CE approved

SPARE PARTS

CRPENR	REPLACEMENT PEN red
CRPENB	REPLACEMENT PEN blue

SEPARATE PROBE SELECTION, to be used on CR4-220

PART N°	PROBE TYPE	TEMP. RANGE / ACCURACY	VOLTAGE RANGE	RH RANGE / ACCURACY	PRESS. RANG / ACCURACY	DEW POINT RANGE
KTH	Temperature / humidity	-40 to +55°C ±1°C (-40 to +130°F ± 2°F)	-	0-100% at 0 to +55°C (+32 to +130°F) ambient, ± 2%	-	0 to +55°C (+32 to +130°F)
KTT	Dual temperature	-40 to +55°C ± 1°C (-40 to +130°F ± 2°F)	-	-	-	-
KTP	Temperature / pressure	-40 to +55°C ± 1°C (-40 to +130°F ± 2°F)	-	-	0 to 35 bar (0 to 500 Psi) ± 1%FS	-
KPP	Dual pressure	-	-	-	0 to 35 bar (0 to 500 Psi) ± 1%FS	-
KTE	Temperature / event	-40 to +55°C ± 1°C (-40 to +130°F ± 2°F)	24 VAC-270 VAC 24 VDC-180 VDC	-	-	-
Maximum ranges on different charts		-30 to +50°C (-20 to +120°F)	ON – OFF	0 to 100%	0 to 35 bar (0 to 500 Psi)	

CR87B-220C

TEMPERATURE RECORDER

Remote reading, with 3 different temperature ranges and 3 different recording speeds

FEATURES

- Designed specifically for refrigerator, freezer and environmental temperature measurement.
- Employs advanced microcontroller design that enables this versatile instrument to accurately measure and record temperatures in air, gas, liquids, powders, solids, and semi-solids.
- Recordings can be made from any distance up to 30 meters (100 feet) away by using an optional long length sensor wire.
- All controls on front panel for fast and easy setup.
- Furnished complete with 2 cartridge pens and 60 assorted charts.
- Convenient fold down carrying handle and snap-on extra support legs.
- Free standing or wall mounted (using existing keyhole slots located on back of the case).

SPECIFICATIONS

- Temp. scale selectable: **-40°C to 0°C, -30°C to +10°C, +10°C to +50°C**
- Ambient operating temperature range: 0°C to +60°C
- Ambient operating relative humidity: 96% maximum
- Temperature accuracy: **± 1°C**
- Chart speed selectable: **6 hrs., 24 hrs., 7 days**
- Chart rotation mode: Selectable - single turn or continuous
- Chart speed accuracy: **± 1%**
- Chart diameter: **152 mm (6")**
- Large 3 digit LED display 13 mm (0.5")
- Temperature sensor: **4,5 m (15')** long sensor wire with **102 mm (4")** stainless steel submersible probe
- Primary power supply: 220-240 VAC, 50/60Hz.
- Alternative power: 12 Volt vehicle operation with optional adapter
- Battery backup: 8 AA Alkaline batteries (not supplied)
- Battery life: 48 hours continuous use
- Ink type recording pen (black)
- Case size: **235 x 184 x 70 mm (9 1/4" x 7 1/4" x 2 3/4")**
- Weight: **2 kg (4.7 lbs.)**

SPARE PARTS

CR87-10	REPLACEMENT CHARTS -40°C to 0°C / 24hrs (60 charts)
CR87-14	REPLACEMENT CHARTS -30°C to +10°C / 6hrs (60 charts)
CR87-16	REPLACEMENT CHARTS -40°C to 0°C / 7days (60 charts)
CR87-17	REPLACEMENT CHARTS -30°C to +10°C / 7days (60 charts)
CR87-18	REPLACEMENT CHARTS +10°C to +50°C / 7days (60 charts)
CR87-22	REPLACEMENT CHARTS -40°C to 0°C / 31days (60 charts)
CR87-S22	Spare temperature sensor, length: 22,8 m (75')
CR87-S30	Spare temperature sensor, length: 30,4 m (100')
CR87-SL3	Extension cable for temperature sensor, length: 3 m (10')
CRPEN	REPLACEMENT PEN black
CRPENR	REPLACEMENT PEN (standard) red
CRPENB	REPLACEMENT PEN (standard) blue



CR87B-220C

25563

DELTATRAK TEMPERATURE RECORDER

The 5 day disposable temperature recorder is an inexpensive, one-time use temperature recorder indispensable for HVAC/R uses. It gives an accurate 5-day strip chart recording of a wide ambient temperature range. It can be easily changed on the job! After use, recycle it.

FEATURES

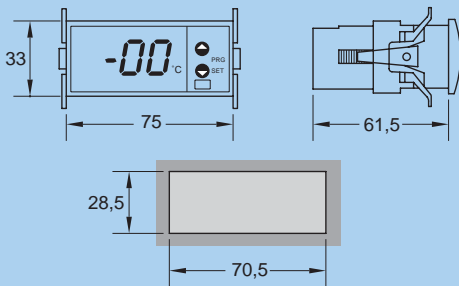
- Inexpensive
- Factory calibrated, no need for field calibration
- Security sealed, tamper proof and built rugged.
- Ideal monitor/verification of performance of HVAC or refrigeration units, after installation or repair.
- Worry-free from loss or breakage of an expensive recorder.
- Simple to understand and use.
- Ideal to use when a number of jobs are in progress and several recorders become necessary.
- Never need to repair since they are used only once.
- Records in °C and °F.
- Measuring range: -25°C to +35°C (-20°F to +100°F)



25563



TPM-1/V2



TEMPERATURE CONTROLLERS

"TOP CLASS PERFORMANCE"

"ALL IN ONE THERMOSTAT"

"SMALL IN DIMENSIONS"

"LOW IN PRICE"

APPLICATION

- Used to display and regulate *TEMPERATURES* and suitable for controlling heating or cooling units or systems.
- Modular design for easy panel mounting.

FEATURES

- Easy to use following the simple instructions in each unit.
- Suitable to limit the *SET POINT* temperature, setting minimum and maximum values.
- Adjustable *DIFFERENTIAL* (hysteresis) from **1°C to 20°C**
- Adjustable *TIME DELAY* between relay commutations **up to 99 min.**
- Adjustable *DEFROST TIME* duration (cold operation) **up to 99 min.**
- Adjustable *DEFROST FREQUENCY* from **1 to 99 hours.**
- In case of probe failure the unit displays a *MALFUNCTION CODE* and the *DEFROST RELAY* continues to operate for **24 hours.**

SPECIFICATIONS

- "CE" Marking
- Relay output: **8A, 230 Volt, cos φ = 1**
- Temperature range: **-50°C to +99°C** (-58°F to +210°F)
- Controller accuracy: **± 1°C (± 1.8°F)**
- Probe tolerance at 25°C: **± 0,4°C (32.7°F)**
- Standard **PROBE-01/V2** included: **1,5 m** length (5 Ft)
- Maximum probe temperature: **150°C (300°F)**
- Ambient temperature range: **+5°C to +50°C** (+41°F to +122°F)
- Storage temperature: **-30°C to +70°C** (-22°F to +158°F)
- Dimensions: **75 x 33 mm** (2.96 x 1.30 inch)
- Panel cut-out dimensions: **70,5 x 28,5 mm** (2.76 x 1.13 inch)

1. CONTROLLERS FOR PANEL MOUNTING

TPM-1/V2

TPM-2/V2

TSPM-2/V2

TSPM-1/V2

TSPM-3

THERMOMETER: 230 Volt AC (6.7 mA)

THERMOMETER: 12/24 Volt DC (76/55 mA)

THERMOSTAT: 230 Volt AC (8.2 mA) with 1 relay

THERMOSTAT: 12/24 Volt DC (110/71 mA) with 1 relay

THERMOSTAT 3 DIGIT: 230 Volt AC (8.4 mA). Decimal read out with 3 relays

Relay 1: Control (compressor) 16A, 250 V, cos φ = 1

Relay 2: Defrost 8A, 250 V, cos φ = 1, SPDT switch

Relay 3: Fan 6A, 250 V, cos φ = 1, SPST

Equipped with digital input and connector for parameter transfer and data communication.

2. CONTROLLERS FOR WALL MOUNTING

IDEM AS "CONTROLLERS FOR PANEL MOUNTING" EXCEPT FOR:

- Dimensions: **170 x 92 x 40 mm** (6.7 x 3.6 x 1.5 inch)
- Relay output: **16 A, 230 Volt, cos φ = 1**

TSWM-2/V2

TWM-1/V2

THERMOSTAT: 230 Volt AC (8.4 mA)

THERMOMETER: 230 Volt AC (6.7 mA)

PROBES FOR ABOVE PANEL AND WALL MOUNTING CONTROLLERS

PROBE-01/V2

PROBE-03/V2

PROBE-06/V2

PROBE NTC,

Length: **1,5 m** (5.0 Ft) included with above

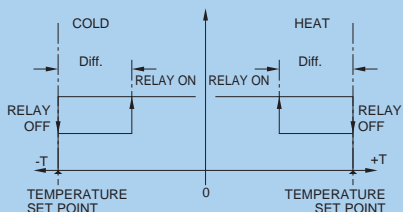
PROBE NTC,

Length: **3,0 m** (10 Ft)

PROBE NTC,

Length: **6,0 m** (20 Ft)

CONTROL OPERATION



3. COMMERCIAL - DOMESTIC THERMOSTATS

TSWM-10 PROGRAMMABLE DIGITAL THERMOSTAT

FEATURES

- Pre-set 7 days programs
- Easy to change pre-set programs
- Manual temperature override
- Permanent temperature override
- Time, room temperature and settings permanently showing on the display
- Adjustable differential
- Short cycle delay for cool mode
- Operate by 2 x AA size batteries
- Heat and cool selectable

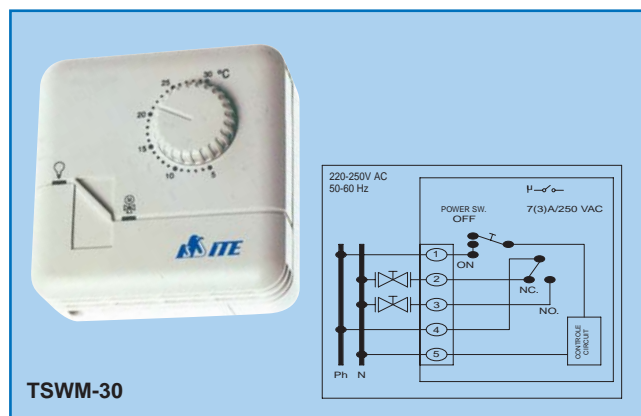
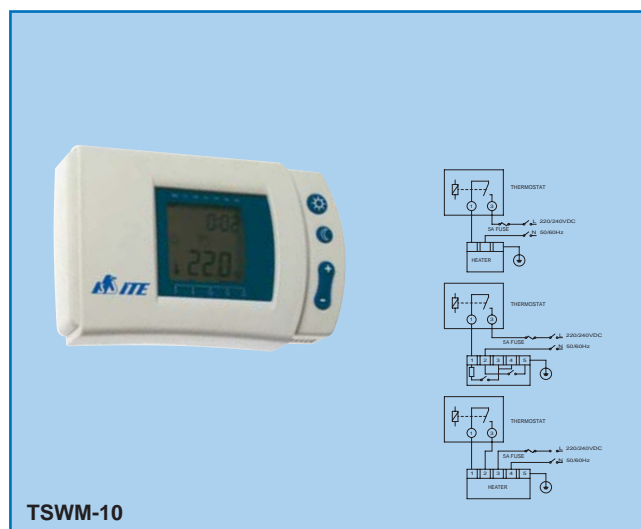
SPECIFICATIONS

- Temperature range: **5°C to 30°C**
- Differential: dip switch selectable $\pm 0.5^\circ\text{C}$ or $\pm 0.2^\circ\text{C}$
- Temperature accuracy: $\pm 0.5^\circ\text{C}$
- Rated switching power: **250V, 6A** resistive load or **2A** inductive load
- Min on time in heating mode: 1 minute
- Min off time air-conditioning mode: 3 minutes
- Size: **130 x 84 x 30 mm**
- **CE, GS** approved

TSWM-30 ELECTRONIC ROOM THERMOSTAT for heat and cool installation

FEATURES

- Designed with highly accurate NTC thermistor sensor that, incorporated with a high performance electronic control circuit, provides accurate temperature switching control
- Easy to operate and to install
- Input range: **220-250 VAC**
- Output: Resistive load: **7AMPS** at 230VAC Max. **1,600WATT**
Inductive load: **3AMPS** at 230VAC
- **CE, GS** approved



4. UNIVERSAL ECONOMY THERMOSTAT

TSWM-35 THERMOSTAT -35°C +35°C

FEATURES

- Fully encased adjustable thermostat
- Easy to operate and to install
- Can be used for heating or cooling applications
- Particularly suitable for automatic adjustment of refrigeration equipment
- Liquid filled sensing bulb (for ambient sensing)

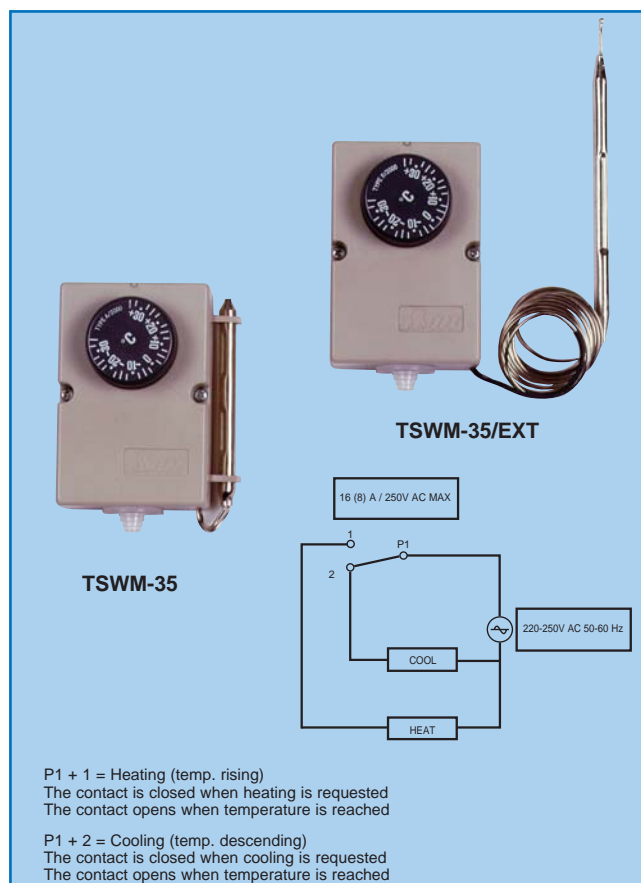
SPECIFICATIONS

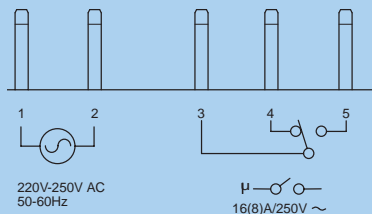
- Temperature range: **-35°C to +35°C**
- Max. allowable temperature: **+55°C**
- Accuracy: $\pm 3^\circ\text{C}$
- Differential: $3 \pm 2^\circ\text{C}$
- SPDT switch: **16(8)A; 250VAC**
- Size: **86 x 58 x 35 mm**
- IP44
- **CE** approved

TSWM-35/EXT THERMOSTAT WITH CAPILLARY -35°C +35°C

FEATURES

- Same as above TSWM-35 but with remote sensing bulb
- Capillary length: **1,7 meter**





TH-820

5. PROGRAMMABLE TIMERS

TH-820

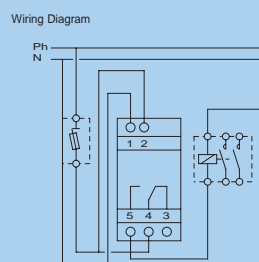
WEEKLY & DAILY TIMER MODULE

FEATURES

- Anti spark filter
- Latest technology CMOS quartz micro-controller
- Digital electronics general purpose time switch with daily and weekly programs
- Repeat programs with 8 ON/OFF locations
- Shortest switching interval 1 minute
- LCD indication for time-of-day, weekday and switching status
- NiMH rechargeable button cell back up battery for power reserve more than 200 hours after fully charged. NiMH is an environmental protection free green battery.
- Three ways override operating mode for ON/AUTO/OFF by push button
- Simple and easy to program and operate by multi-functional keys
- LED indicates ON/OFF status

SPECIFICATIONS

- Input range: 220-250 VAC
- Output: Resistive load: 16AMPS at 250VAC
Inductive load: 8AMPS at 250VAC
- Back up battery: 1.5 VDC NiMH rechargeable battery
- Battery life cycle: 1,000 times from empty to fully charged
- Battery reserve time: more than 200 hours after fully charged
- **CE, GS** approved



TH-850

TH-850

ELECTRONIC PROGRAMMABLE TIMER FOR DIN RAIL INSTALLATION

FEATURES

- Same features as TH-820
- Easy installation for DIN rail application
- Protected with transparent front cover
- Designed for full module of 35 mm size

SPECIFICATIONS

- Input range: 220-250 VAC
- Output: Resistive load: 16AMPS at 230VAC Max. 3,680WATT
Inductive load: 8AMPS at 230VAC
- Back up battery: 1.5 VDC NiMH rechargeable battery
- Battery life cycle: 1,000 times from empty to fully charged
- Battery reserve time: more than 200 hours after fully charged
- **CE, GS** approved

COLD STORE ALARM & HEATING CABLES

1. COLD ROOM EMERGENCY ALARM & BUILT IN DIGITAL THERMOSTAT

EA-208A/V2 EMERGENCY ALARM UNIT (Complete kit)

FEATURES

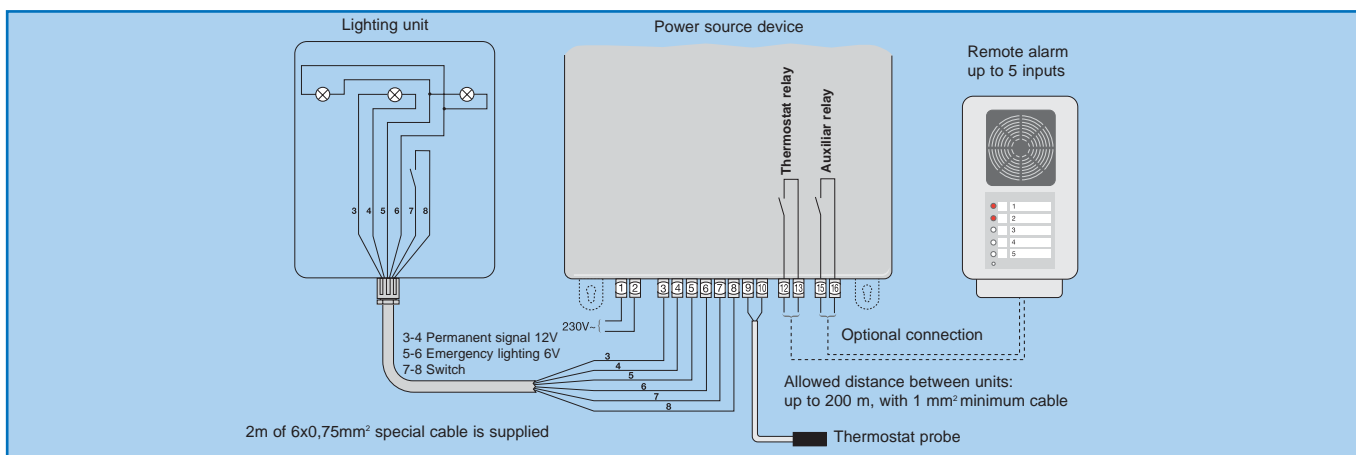
- The **EMERGENCY ALARM EA-208A/V2** gives safety protection for cold store and room atmosphere against power cut, accident, the risk of being locked in a low temperature room, etc...
- Provides **OPTICAL, ACOUSTIC ALARMS** and **EMERGENCY LIGHT**.
- The system fully complies with the norms and regulations and has:
 - One **230V/50-60Hz** power supply connection.
 - One **DC Battery** connection in case of AC power cut.
 - One built in **thermometer-thermostat** to permanently **DISPLAY** the cold store temperature, to **CONTROL** it and to send an automatic **REMOTE ALARM** in case of failure or accident.
- Once the **EA-208A/V2** is connected the normal signal light will be permanently lit. In case of power cut the emergency light comes on automatically. When someone stays locked inside, he can push down the light switch then the outside optical and acoustic alarms will be activated. The alarm stays "ON" until the switch returns to "OFF".
- The **EA-208A/V2** operates simultaneously with AC power and battery.
- The auxiliary relay can operate any remote alarms.

SPECIFICATIONS

- | | |
|-----------------------------|-------------------------------------|
| • Power supply: | 230V/50-60Hz |
| • Battery: | Ni-Cad 1.2V (five batteries) |
| • Nominal current: | 33mA |
| • Emergency lighting lamps: | 6V, 200mA (two lamps) |
| • Permanent signal lamp: | 12V, 100 mA (one lamp) |
| • Light + alarm autonomy: | Above 1 hour |
| • Sound level: | Above 90 decibels per metre |
| • Auxiliar relay: | 8A, Cos φ =1 |
| • Thermostat relay: | 8A, Cos φ =1 (TSPM-2) |
| • Lighting unit protection: | IP 65 |
| • Lighting unit dimensions: | 106 x 120 x 66 mm |
| • Source dimensions: | 240 x 160 x 75 mm |

INSTALLATION & INSTRUCTIONS

- The **EA-208A/V2** should be installed inside the cold store, next to the exit and at a height accessible to any person.
- The power source must be located outside in a visible area.
- The Probe must be installed in a free area and protected from any thermal influence.
- The Unit to be connected following the diagram shown below.





2. SELF-REGULATING FLEXIBLE HEATING CABLE FOR TEMPERATURE >65°C

HC-221-1	CABLE SET:	1 m
HC-221-5	CABLE SET:	5 m
HC-221-10	CABLE SET:	10 m
HC-221-50	CABLE SET:	50 m

KIT-905	END SEAL KIT
KIT-906	JOINTING KIT
KIT-908	CONNECTION KIT
HCTK-239	TERMINATION KIT

APPLICATION

- This is a parallel circuit *SELF-REGULATING CABLE* mainly used for protection against ice formations in pipes and tanks.
- It can be used to maintain temperatures of up to **+65°C (+150°F)** and is suitable for the general following applications:
 - AERA CLASSIFICATION*: Normal use.
 - PIPE MATERIAL* or *SURFACE*: Carbon steel, stainless steel, plastic, painted metallic pipes or surfaces.
 - ENVIRONMENT*: Dry or damp but not corrosive.

FEATURES

- The heating element consists of a special polymer with a carbon mixture which acts as a semi-conductor.
- When the temperature drops in the cable, conductivity is created in the polymer reducing its electrical resistance and therefore, the current travel through the polymer increasing the temperature which controls the temperature level.
- Conversely, when the cable temperature rises, its conductivity reduces therefore increasing its electrical resistance and reducing its power requirements.

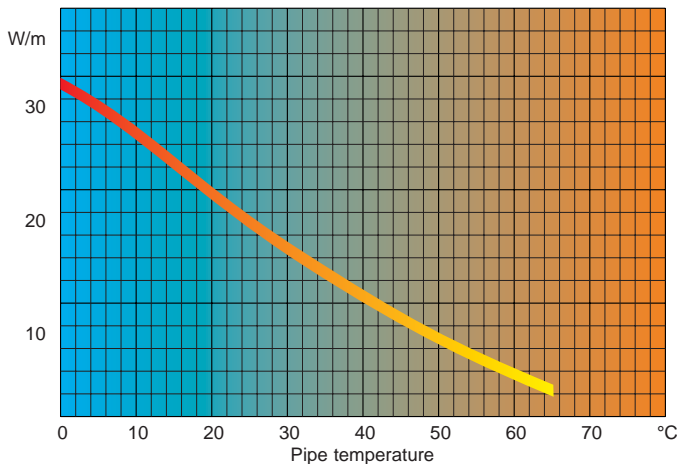
SPECIFICATIONS

- Power output at 230 Volts and +10°C (+50°F): **25.3 W/m**.
- Power output depending on temperature: See graph
- Continuous max. exposure temperature: **+65°C (+150°F)**.
- Intermittent maximum exposure temperature for a maximum cumulative exposure time: **+85°C (+185°F)** for **1000 hours**.
- Electric strength voltage: **1500 Volts**.
- Nominal external dimensions: **5 x 12 mm**.
- Nominal weight: **100 g/m (1.2 oz/ft)**.
- Maximum cable length per circuit starting at +10°C (+50°F) and according to protection sizing:
16 A = 105 m (344 Ft), 20 & 25 A = 120 m (393 Ft).
NOTE: The lengths indicated are only approx. for each circuit. For maximum safety a 30 mA differential must be maintained.
- Minimum installation temperature: **-60°C (-76°F)**.
- Minimum bend radius:
 At +20°C (+68°F) = **12,7 mm (1/2" inch)**
 At -40°C (-40°F) = **26 mm (1 inch)**

ACCESSORIES

- The appropriate connection kit must be used to join and seal the end of the cable.

POWER OUTPUT (230V) ON INSULATED STEEL PIPES



Connection kit
KIT-908



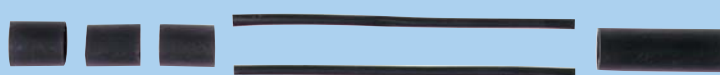
Jointing kit
KIT-906



End seal kit
KIT-905



Termination kit.....HCTK-239



3. CONSTANT 30W/m WATTAGE HEATING CABLE (230V)

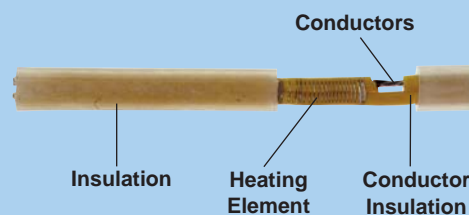
HC-234-1	CABLE WITHOUT BRAIDING PROTECTION length 1 m
HC-234-50	CABLE WITHOUT BRAIDING PROTECTION length 50 m
HC-234-150	CABLE WITHOUT BRAIDING PROTECTION length 150 m
HC-2341-1	CABLE WITH BRAIDING PROTECTION length 1 m
HC-2341-50	CABLE WITH BRAIDING PROTECTION length 50 m
HC-2341-150	CABLE WITH BRAIDING PROTECTION length 150 m

FEATURES

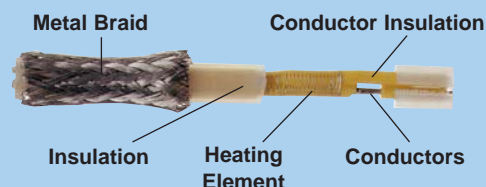
- These cables offer a permanent *CONSTANT WATTAGE* power output per *LINEAR METRE* (At any length).
- Use against frost protection of any metal surface (up to **+55°C**) as well as in drainage pipes (Commercial and industrial).
- A continuous heating element wire is coiled around the two main insulated conductors (touching them at regular interval points). This forms many identical parallel resistors and makes it possible to cut the cable at any required length on refrigeration site.
- The power output is constant between **A-B**, **B-C**, **C-D**, etc... (See bottom picture explanation).

SPECIFICATIONS

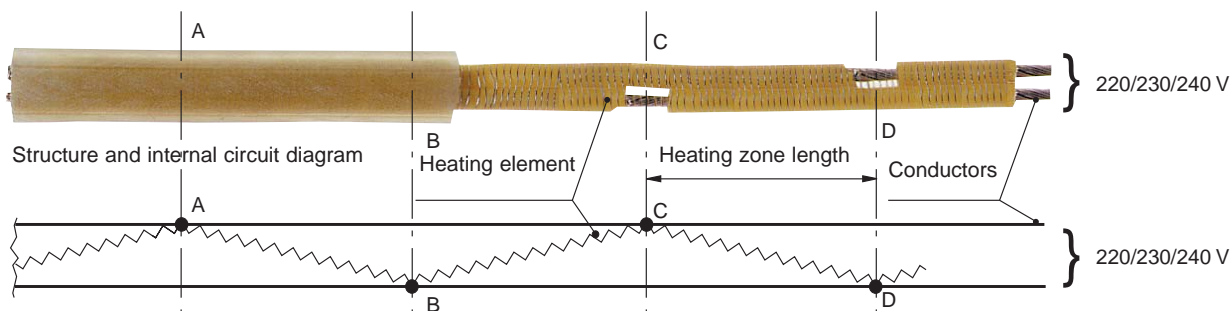
- | | |
|----------------------------------|----------------------------------|
| • Power output at 230V: | 30 W/m |
| • Max. exposure temp. power on: | +55°C |
| • Max. exposure temp. power off: | +70°C |
| • Maximum circuit length: | 60 m |
| • Heating zone length: | 595 mm |
| • Tinned copper conductors: | 0.75 mm² (two) |
| • Heating conductor element: | Nickel-chrome |
| • Insulation material: | Silicone rubber |
| • Braided tinned copper sheath: | 1 mm² (HC-341) |
| • Test voltage and "CE" marking: | 1500V |
| • Loading tolerance: | ± 7% |
| • Outer dimensions: | 7.5 x 5.5 mm (HC-2341) |
| • Minimum bend radius at +25°C: | 20 mm |
| • Standard reel length: | 150 m |



HC-234



HC-2341



HCTK-383 CABLE TERMINATION KIT
For both ends as shown on bottom picture

CONTENTS

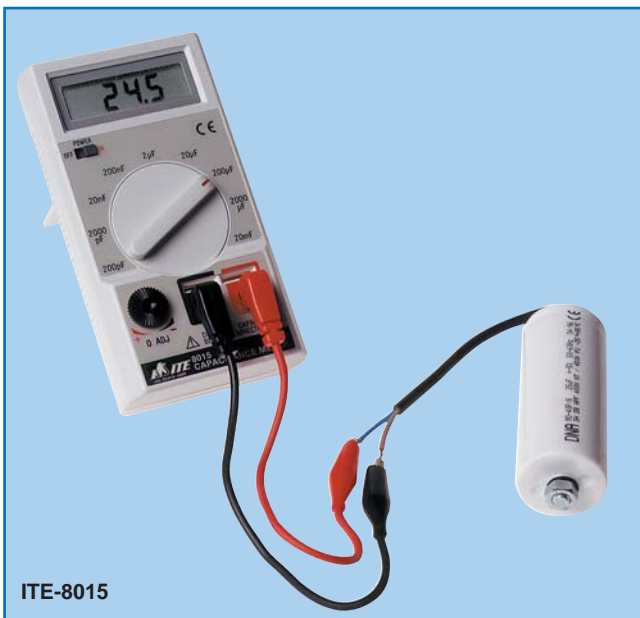
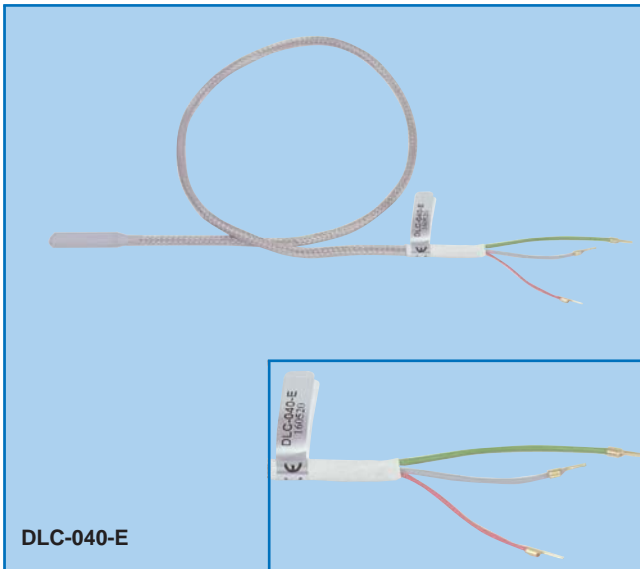
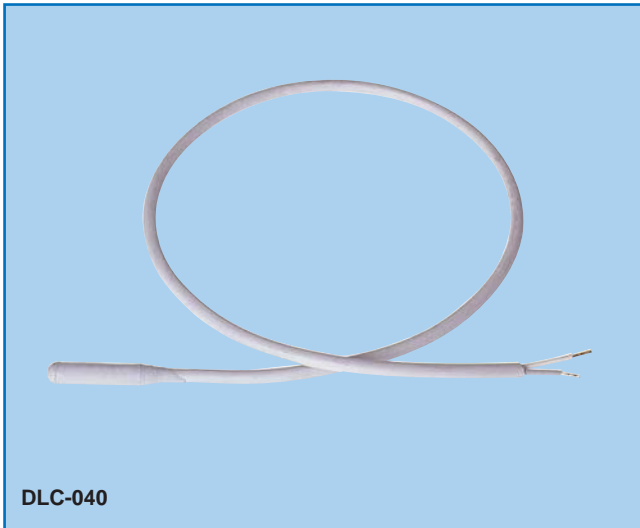
- **20 mm HEAT-SHRINK SLEEVE, Ø 6 mm**
To be used with both **HC-234** and **HC-2341** HEATING CABLES
- **75 mm HEAT-SHRINK SLEEVE, Ø 6 mm**
To be used with both **HC-234** and **HC-2341** HEATING CABLES
- **TWO 20 mm HEAT-SHRINK SLEEVES, Ø 12 mm**
Used for **HC-2341** HEATING CABLE (only)

The **HCTK-383 CABLE TERMINATION KIT** is used to protect and insulate the connection cold lead and the end seal for each length of any **HC-234** and **HC-2341 HEATING CABLES** cut of the reel.
To use the *TERMINATION KIT*, check the corresponding general instructions of safety for any constant wattage parallel *HEATING CABLES*.

HCSS-404 HEAT-SHRINK SLEEVE, Ø 6 mm, length 75 mm
Used for **HC-234** and **HC-2341** HEATING CABLES



HCTK-383



4. " ITE " DRAIN LINE HEATER CABLE

DLC-040	DRAIN LINE HEATER , length 1 m, 40W, 1322 ohm/m (Wattage on 110V: 10W)
DLC-040-E	Same as DLC-040, but with earth contact
DLC-052	DRAIN LINE HEATER , length 1,3 m, 52W, 793 ohm/m (Wattage on 110V: 13W)
DLC-060	DRAIN LINE HEATER , length 1,5 m, 60W, 588 ohm/m (Wattage on 110V: 15W)
DLC-080	DRAIN LINE HEATER , length 2 m, 80W, 330 ohm/m (Wattage on 110V: 20W)
DLC-080-E	Same as DLC-080, but with earth contact
DLC-120	DRAIN LINE HEATER , length 3 m, 120W, 147 ohm/m (Wattage on 110V: 30W)
DLC-120-E	Same as DLC-120, but with earth contact
DLC-160	DRAIN LINE HEATER , length 4 m, 160W, 82 ohm/m (Wattage on 110V: 40W)
DLC-160-E	Same as DLC-160, but with earth contact
DLC-200	DRAIN LINE HEATER , length 5 m, 200W, 53 ohm/m (Wattage on 110V: 50W)
DLC-240	DRAIN LINE HEATER , length 6 m, 240W, 36 ohm/m (Wattage on 110V: 60W)
DLC-240-E	Same as DLC-240, but with earth contact
DLC-320	DRAIN LINE HEATER , length 8 m, 320W, 21 ohm/m (Wattage on 110V: 80W)
DLC-360	DRAIN LINE HEATER , length 9 m, 360W, 16 ohm/m (Wattage on 110V: 90W)
DLC-400	DRAIN LINE HEATER , length 10 m, 400W, 13,7 ohm/m (Wattage on 110V: 100W)

FEATURES

- Condensates draining.
- No condensation for electronic cases.
- Temperature maintenance for process heating.

SPECIFICATIONS

- External diameter: **5,5 mm**
- Wall thickness: min. **1,1 mm**
- Voltage: **110V** or **230V**
- Internal and external insulating material: Silicone rubber
- Heater material: Resistive wire Ni/Cr 60/15 or Cu/Ni
- Maximum temperature: **+200°C** (392°F)
- Minimum temperature: **-40°C** (-40°F)
- 110V models with 40W/m capacity available upon request.

ANALYSERS, TESTERS & MULTIMETERS

1. DIGITAL TESTERS

ITE-8015 DIGITAL CAPACITANCE METER

FEATURES

- Range: **0-20000 µF**.
- Over range indication.
- Fuse protected.
- Low battery indication.
- Battery life: Alkaline **± 200 hours**.
- Zero adjustment.
- Accuracy: 0.5%.
- Operating temperature: **0°C** to **+40°C** (+32°F to +104°F),
0 - 80% relative humidity.
- Dimensions: **72 x 135 x 33 mm** (W x H x D).
- Weight: **207 gr** (7,3 oz) including battery.

PRT-8020 PHASE ROTATION TESTER

FEATURES

- Shows the correct way to make 3 phase connections and prevents as such costly damage.
- Saves time, no need to disconnect drive shaft couplings.
- Identifies open windings.
- Visual as well as audible phase rotation indication.
- Low battery indicator (insufficient battery power will lead to faulty testing).
- Protected by double insulation voltage withstand protection: DC 6KV.
- Reliable solid state components.
- Alligator test clips open 12 mm (1/2") to fit most terminals.
- Shirt pocket size.

SPECIFICATIONS

- Signal input voltage: 50 to 500 VAC overload Protection till 750 VAC.
- Signal input frequency: 45 to 65 Hz.
- Operating temperature: 0 to + 40°C.
- Operating humidity: less than 80 % relative humidity.
- Power supply: 9 volt NEDA 1604 IEC battery.
- Dimensions: 85 x 50 x 20 mm (height x width x depth)
- Weight: 210 gr including battery.
- Accessories included: 200 cm (2 m) test leads with alligator test clips, instruction manual, vinyl pouch.



PRT-8020

ITE-8010 DIGITAL OPTICAL TACHOMETER

FEATURES

- Range: 10 to 100000 rpm.
- Direct light-beam sensing.
- Measuring distance: 50 to 300 mm.
- Low battery indication.
- Memory recall function.
- Data hold function.
- Automatic range selection.
- Operating temperature: 0°C to +50°C (+32°F to +122°F).
- Accuracy:
 - ± 0,01% ± 1 digit (10 to 6000 rpm)
 - ± 0,04% ± 1 digit (6000 to 12000 rpm)
 - ± 0,08% ± 1 digit (12000 to 30000 rpm)
 - ± 0,15% ± 1 digit (over 30000 rpm).
- Resolution:
 - 0,1 rpm (10 to 9999,9 rpm)
 - 1 rpm (10000 to 99999 rpm)
 - 10 rpm (over 100000 rpm).
- Dimensions: 192 x 96 x 38 mm.
- Weight: 300 gr (including battery).



ITE-8010



SLM-8050

SLM-8050 DIGITAL SOUND LEVEL METER

FEATURES

- AUTO Measuring Range: 30dB to 130dB
- Self-calibration
- Frequency reading in: dB.
- Measuring level range:
A: **30 dB to 130 dB**
C: **35 dB to 130 dB**
- Frequency Range: 30Hz to 8KHz
- Microphone: 1/2 inch electret condenser microphone
- LCD Digital Display: 1999 (4 digits) Back Light, Auto Power Off
- Resolution: **0.1 dB**
- Display update: **0.5 sec.**
- Selectable sensing cycle: FAST or SLOW selectable
- Accuracy: ± 1.5 dB (under reference conditions, 94dB @ 1kHz)
- Dynamic Range: **50 dB**
- Maximum and minimum hold function.
- Power supply: one 9V battery, NEDA 1604 or IEC 6F22 or JIS 006P
- Battery life: approximately 50 hours (with alkaline battery)
- Operation Temperature: **5°C to 40 °C**.
- Operation Humidity: <80% RH
- Storage Temperature: **-10°C to 60°C**
- Storage Humidity: <70% RH
- In accordance with IEC651 Type 2, ANSI S1.4 Type 2.
- Dimensions: **200 x 55 x 38mm** (L x W x H)
- Weight: about **170 gr** (including battery)
- Accessories included: Carrying case, 9V battery, instruction manual and windscreen



VT-400

2. DIGITAL MULTIMETERS

VT-400 UNIVERSAL VOLTAGE TESTER

FEATURES

- Designed for industrial purposes and suitable for voltage checks across two terminals in low voltage, domestic and heavy current circuits.
- Testing range: **6-400V AC/DC**.
- Display: $\pm 6, 12, 24, 50, 120, 220$.
- 400V AC/DC= LED.
- Max current: **30mA**.
- Working temperature: **-10°C to +50°C**.
- Frequency: **0-100Hz**.
- CE and GS approved.
- Dimensions Overall length: **20 cm**
Tip only: **5 cm**
Thickness: **2 cm**
- Weight: **130 gr**.

ITE-8090

DIGITAL CLAMP-ON VOLT-OHM-AMMETER

The ideal meter for field maintenance and inspection work on all types of electrical equipment.

FEATURES

- Maximum jaw opening: **40 mm**.
- Peak hold function.
- Data hold function.
- Continuity alarm below **100 Ω** .
- Frequency measurements.
- Diode check.
- Low battery indication.
- Operating temperature and humidity:
0°C to +40°C (+32°F to +104°F), below **80% RH**.
- Storage temperature and humidity:
-10°C to +60°C (+14°F to +140°F), below **80% RH**.
- Dimensions: **208 x 65 x 31 mm**
- Weight: **330 gr**.
- Supplied with test probe, instruction manual, carrying case, 9V battery.
- Ranges

0-600A	AC current
0-750V	AC voltage
0-1000V	DC voltage
0-20 kΩ	Resistance
0-2 MHz	Frequency



ITE-3700

AUTO RANGE DIGITAL MULTIMETER (AC-DC)

Capable of measuring, with very high accuracy, all of the parameters needed for troubleshooting and field maintenance. Easy to use because of single rotary function switch and autoranging feature.

FEATURES

- Automatic power shut-off. Min/max recording.
- Data hold. Overload indication.
- Polarity indication. Diode check. Low battery indication.
- Operating temperature and humidity:
0°C to +40°C, below **80% RH**.
- Storage temperature and humidity:
-10°C to +60°C, below **70% RH**.
- Dimensions: **186 x 86 x 39 mm** (L x W x H).
- Weight : **380 gr**.
- Supplied with test lads, instruction manual, carrying case and spare fuse (250V).
- Supplied with CE mark.
- Warranty 1 year.
- Continuity indication below **40 Ω** .
- Ranges

0-20A	AC current
0-20A	DC current
0-750V	AC voltage
0-1000V	DC voltage
0-40 MΩ	Resistance
0-500 kHz	Frequency
0-30 μF	Capacity test





FCG-607R



TP-402B



PSA-200B

ACCESSORIES FOR MULTIMETERS, CLAMPMETERS AND OTHER ELECTRONIC TEST INSTRUMENTS

Conform to IEC 1010 norm

FCG-607B	BLACK FLEXIBLE CROCODILE GRABBER jaw size 11,5 mm
FCG-607R	RED FLEXIBLE CROCODILE GRABBER, jaw size 11,5 mm

TP-402B	BLACK TOUCH PROBE with stainless steel tip, which allows to come through insulators (wire needle), oxidation coats and compact circuits.
TP-402R	RED TOUCH PROBE with stainless steel tip, which allows to come through insulators (wire needle), oxidation coats and compact circuits.

PSS-100B	BLACK SILICON PATCH CORD, length 100 centimetres, male x male straight fixed safety.
PSS-200B	Idem as above but length 200 centimetres.
PSS-100R	RED SILICON PATCH CORD, length 100 centimetres, male x male straight fixed safety.
PSS-200R	Idem as above but length 200 centimetres.

PSA-200B	BLACK SILICON PATCH CORD, length 100 centimetres, male right angled safety - male straight safety.
PSA-200R	RED SILICON PATCH CORD, length 100 centimetres, male right angled safety - male straight safety.

REF	Max. Current (A)	Voltage	Connections Ø (mm)	Resistance mΩ	Length (mm)	Temp. Range (°C)
FCG-607B FCG-607R	6	1000 V	4	< 50	172	-20 to +80
TP-402B TP-402R	20			< 5	140	
PSS-100B PSS-100R	25			20 (max)	1000	-60 to +180
PSS-200B PSS-200R PSA-200B PSA-200R				30 (max)	2000	

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Part. nr.	Pdf file
HC-2341-1	see Electronic measurement and control instruments
HC-2341-150	see Electronic measurement and control instruments
HC-234-150	see Electronic measurement and control instruments
HC-2341-50	see Electronic measurement and control instruments
HC-234-50	see Electronic measurement and control instruments
HCT-212	see Tube working tools
HCT-B	see Tube working tools
HCTK-239	see Electronic measurement and control instruments
HCT-P	see Tube working tools
HCT-S	see Tube working tools
HDA-120-B	see Service manifolds, gauges and charging hoses
HDA-120-R	see Service manifolds, gauges and charging hoses
HDA-120-Y	see Service manifolds, gauges and charging hoses
HDA-36-B	see Service manifolds, gauges and charging hoses
HDA-36-R	see Service manifolds, gauges and charging hoses
HDA-36-R/410	see Service manifolds, gauges and charging hoses
HDA-36-Y	see Service manifolds, gauges and charging hoses
HDA-36-Y/410	see Service manifolds, gauges and charging hoses
HDA-60-B	see Service manifolds, gauges and charging hoses
HDA-60-R	see Service manifolds, gauges and charging hoses
HDA-60-R/410	see Service manifolds, gauges and charging hoses
HDA-60-Y	see Service manifolds, gauges and charging hoses
HDA-60-Y/410	see Service manifolds, gauges and charging hoses
HDA-72-B	see Service manifolds, gauges and charging hoses
HDA-72-R	see Service manifolds, gauges and charging hoses
HDA-72-Y	see Service manifolds, gauges and charging hoses
HDCS-36-B/410/V	see Service manifolds, gauges and charging hoses
HDCS-36-R/410/V	see Service manifolds, gauges and charging hoses
HDS-120-B/V	see Service manifolds, gauges and charging hoses
HDS-120-R/V	see Service manifolds, gauges and charging hoses
HDS-120-Y/V	see Service manifolds, gauges and charging hoses
HDS-12-B/V	see Service manifolds, gauges and charging hoses
HDS-12-R	see Service manifolds, gauges and charging hoses
HDS-12-R/V	see Service manifolds, gauges and charging hoses
HDS-12-Y	see Service manifolds, gauges and charging hoses
HDS-12-Y/V	see Service manifolds, gauges and charging hoses
HDS-36-B/V	see Service manifolds, gauges and charging hoses
HDS-36-R/V	see Service manifolds, gauges and charging hoses
HDS-36-R/V	see Service manifolds, gauges and charging hoses
HDS-36-R/V	see Service manifolds, gauges and charging hoses
HDS-36-Y/V	see Service manifolds, gauges and charging hoses
HDS-60-B/V	see Service manifolds, gauges and charging hoses
HDS-60-R/V	see Service manifolds, gauges and charging hoses
HDS-60-Y/V	see Evacuating and charging equipment
HDS-60-Y/V	see Evacuating and charging equipment
HDS-60-Y/V	see Service manifolds, gauges and charging hoses
HS56-12-B/V	see Service manifolds, gauges and charging hoses
HS56-12-R/V	see Service manifolds, gauges and charging hoses
HS56-12-Y/V	see Service manifolds, gauges and charging hoses
HS56-36-B	see Service manifolds, gauges and charging hoses
HS56-36-B/V	see Service manifolds, gauges and charging hoses
HS56-36-R	see Service manifolds, gauges and charging hoses
HS56-36-R/V	see Service manifolds, gauges and charging hoses
HS56-36-Y	see Service manifolds, gauges and charging hoses
HS56-36-Y/V	see Service manifolds, gauges and charging hoses
HS56-60-B	see Service manifolds, gauges and charging hoses
HS56-60-B/V	see Service manifolds, gauges and charging hoses
HS56-60-R	see Service manifolds, gauges and charging hoses
HS56-60-R/V	see Service manifolds, gauges and charging hoses
HS56-60-Y	see Service manifolds, gauges and charging hoses
HS56-60-Y/V	see Service manifolds, gauges and charging hoses
HS56-72-B	see Service manifolds, gauges and charging hoses
HS56-72-B/V	see Service manifolds, gauges and charging hoses
HS56-72-R	see Service manifolds, gauges and charging hoses
HS56-72-R/V	see Service manifolds, gauges and charging hoses
HS56-72-Y	see Service manifolds, gauges and charging hoses
HS56-72-Y/V	see Service manifolds, gauges and charging hoses
HDS-72-B/V	see Service manifolds, gauges and charging hoses
HDS-72-R/V	see Service manifolds, gauges and charging hoses
HDS-72-Y/V	see Service manifolds, gauges and charging hoses
HER-319	see Fluid control components
HNS4-04	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
HNS4-06	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
HNS4-08	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
HNS4-10	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
HNS4-12	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
HP-3700	see Fluid control components
HP-3701	see Fluid control components
HP-3702	see Fluid control components
HP-3703	see Fluid control components
HP-3704	see Fluid control components
HP-3706	see Fluid control components
HP-3738	see Fluid control components
HPBV-04P	see Fluid control components
HPBV-06MMP	see Fluid control components
HPBV-06P	see Fluid control components
HPBV-08P	see Fluid control components
HPBV-10MMP	see Fluid control components
HPBV-10P	see Fluid control components
HPBV-12MMP	see Fluid control components
HPBV-12P	see Fluid control components
HPBV-14P	see Fluid control components
HPBV-16MMP	see Fluid control components
HPBV-18P	see Fluid control components
HPBV-19MMP	see Fluid control components
HPBV-22MMP	see Fluid control components

Part. nr.	Pdf file
KIT-908	see Electronic measurement and control instruments
L-11509	see Refrigeration accessories
L-11513	see Refrigeration accessories
L-11575	see Service manifolds, gauges and charging hoses
L-11575	see Refrigeration accessories
L-22101	see Service manifolds, gauges and charging hoses
L-36473	see Refrigeration accessories
L-41600	see Refrigeration accessories
L-49050	see Refrigeration accessories
LEAK-118	see Refrigeration accessories
LEAK-40	see Refrigeration accessories
LEAK-474	see Refrigeration accessories
LEAK-TEFLON-40	see Refrigeration accessories
LG-712	see Fluid control components
LP-4	see Evacuating and charging equipment
LRV-1018	see Fluid control components
LRV-1039	see Fluid control components
LRV-1092	see Fluid control components
LT-10G	see Automatic access valves & fittings
LT-3G	see Automatic access valves & fittings
LT-4G	see Automatic access valves & fittings
LT-5G	see Automatic access valves & fittings
LT-6G	see Automatic access valves & fittings
LT-8G	see Automatic access valves & fittings
LTC-1	see Service manifolds, gauges and charging hoses
M-02	see Fluid control components
M-03	see Fluid control components
M-05	see Fluid control components
M-10	see Fluid control components
M-110	see Fluid control components
M-15	see Fluid control components
M-20	see Fluid control components
M2-106	see Service manifolds, gauges and charging hoses
M2-108	see Service manifolds, gauges and charging hoses
M2-12MHH	see Service manifolds, gauges and charging hoses
M2-14	see Service manifolds, gauges and charging hoses
M2-16	see Service manifolds, gauges and charging hoses
M2-16-B	see Service manifolds, gauges and charging hoses
M2-16-B2	see Service manifolds, gauges and charging hoses
M2-16-HB	see Service manifolds, gauges and charging hoses
M2-16-HH	see Service manifolds, gauges and charging hoses
M2-16-HHB	see Service manifolds, gauges and charging hoses
M2-16-HR	see Service manifolds, gauges and charging hoses
M2-16-M	see Service manifolds, gauges and charging hoses
M2-16-N	see Service manifolds, gauges and charging hoses
M2-16-P	see Service manifolds, gauges and charging hoses
M-30	see Fluid control components
M-60	see Fluid control components
M-80	see Fluid control components
MAPP GAS	see Tube working tools
MARC-15/U	see Evacuating and charging equipment
MB1-ADS	see Service manifolds, gauges and charging hoses
MB1-ADS/VAC	see Service manifolds, gauges and charging hoses
MB2-ADS	see Service manifolds, gauges and charging hoses
MB2-AP	see Service manifolds, gauges and charging hoses
MB4-ADS	see Service manifolds, gauges and charging hoses
MB5-ADS	see Service manifolds, gauges and charging hoses
MB-EP	see Service manifolds, gauges and charging hoses
MB-EP	see Service manifolds, gauges and charging hoses
MB-HH	see Service manifolds, gauges and charging hoses
MB-IP	see Service manifolds, gauges and charging hoses
MB-IP	see Service manifolds, gauges and charging hoses
MBP-EP	see Service manifolds, gauges and charging hoses
MBP-IP	see Service manifolds, gauges and charging hoses
MB-SP	see Service manifolds, gauges and charging hoses
MB-SR	see Service manifolds, gauges and charging hoses
MCC-2	see Service manifolds, gauges and charging hoses
MCC-2/247	see Service manifolds, gauges and charging hoses
MCC-4/4	see Service manifolds, gauges and charging hoses
MCC-4/447	see Service manifolds, gauges and charging hoses
MCC-4/1	see Service manifolds, gauges and charging hoses
MCC-550/4	see Service manifolds, gauges and charging hoses
MCO-06	see Copper tubes, coils & solder fittings (Inch & Metric)
MCO-08	see Copper tubes, coils & solder fittings (Inch & Metric)
MCO-10	see Copper tubes, coils & solder fittings (Inch & Metric)
MCO-12	see Copper tubes, coils & solder fittings (Inch & Metric)
MCO-15	see Copper tubes, coils & solder fittings (Inch & Metric)
MCO-16	see Copper tubes, coils & solder fittings (Inch & Metric)
MCO-18	see Copper tubes, coils & solder fittings (Inch & Metric)
MCO-22	see Copper tubes, coils & solder fittings (Inch & Metric)
MCSS-0.55	see Evacuating and charging equipment
MCSS-0.55/44	see Evacuating and charging equipment
MCSS-1	see Evacuating and charging equipment
MCSS-1/44	see Evacuating and charging equipment
MCSS-2	see Evacuating and charging equipment
MCSS-2/44	see Evacuating and charging equipment
MET-100-06	see Fluid control components
MET-100-07	see Fluid control components
MET-200-12	see Fluid control components
MET-300-13	see Fluid control components
MET-300-16	see Fluid control components
MET-300-21	see Fluid control components
MET-400-28	see Fluid control components
MET-500-32	see Fluid control components
MF-1150C-024U	see Fluid control components

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Part. nr.	Pdf file
MS-34	see Fluid control components
MSK-08	see Tube working tools
MSSK-26	see Tube working tools
MT-02	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
MT-03	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
MT-04	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
MT-06	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
MT-08	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
MT-10	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
MT-12	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
MT-16	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
MT-20	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
MT-24	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
MTS-04	see Fluid control components
MTS-06	see Fluid control components
MTU-06	see Copper tubes, coils & solder fittings (Inch & Metric)
MTU-08	see Copper tubes, coils & solder fittings (Inch & Metric)
MTU-10	see Copper tubes, coils & solder fittings (Inch & Metric)
MTU-12	see Copper tubes, coils & solder fittings (Inch & Metric)
MTU-15	see Copper tubes, coils & solder fittings (Inch & Metric)
MTU-16	see Copper tubes, coils & solder fittings (Inch & Metric)
MTU-18	see Copper tubes, coils & solder fittings (Inch & Metric)
MTU-22	see Copper tubes, coils & solder fittings (Inch & Metric)
MTU-28	see Copper tubes, coils & solder fittings (Inch & Metric)
MTU-35	see Copper tubes, coils & solder fittings (Inch & Metric)
MULTI-R-COMBI/V2	see Evacuating and charging equipment
MV-0077	see Automatic access valves & fittings
MV-0099	see Automatic access valves & fittings
MV-0101	see Automatic access valves & fittings
MV-0111	see Automatic access valves & fittings
MV-1010	see Automatic access valves & fittings
MV-1050	see Automatic access valves & fittings
MV-1060	see Automatic access valves & fittings
MV-1080	see Automatic access valves & fittings
MV-1200	see Automatic access valves & fittings
MV-1212	see Automatic access valves & fittings
MV-1414	see Automatic access valves & fittings
MV-1414C	see Automatic access valves & fittings
MV-1428	see Automatic access valves & fittings
MV-1438	see Automatic access valves & fittings
MV-1440	see Automatic access valves & fittings
MV-1441	see Automatic access valves & fittings
MV-1444	see Automatic access valves & fittings
MV-1446	see Automatic access valves & fittings
MV-1454	see Automatic access valves & fittings
MV-1777	see Automatic access valves & fittings
MV-1808	see Automatic access valves & fittings
MV-1818	see Automatic access valves & fittings
MV-1818C	see Automatic access valves & fittings
MV-2000	see Automatic access valves & fittings
MV-2010	see Automatic access valves & fittings
MV-2010 (QC-E4)	see Automatic access valves & fittings
MV-2012	see Automatic access valves & fittings
MV-2014	see Automatic access valves & fittings
MV-2018	see Automatic access valves & fittings
MV-2019	see Automatic access valves & fittings
MV-2020	see Automatic access valves & fittings
MV-2022	see Automatic access valves & fittings
MV-2022	see Automatic access valves & fittings
MV-2024	see Automatic access valves & fittings
MV-2028	see Automatic access valves & fittings
MV-2035	see Automatic access valves & fittings
MV-2037	see Automatic access valves & fittings
MV-2038	see Automatic access valves & fittings
MV-2041	see Automatic access valves & fittings
MV-2050	see Automatic access valves & fittings
MV-2060	see Automatic access valves & fittings
MV-2070	see Automatic access valves & fittings
MV-2070	see Automatic access valves & fittings
MV-2090	see Automatic access valves & fittings
MV-2094	see Automatic access valves & fittings
MV-2098	see Automatic access valves & fittings
MV-2120	see Automatic access valves & fittings
MV-2140	see Automatic access valves & fittings
MV-2160	see Automatic access valves & fittings
MV-2210	see Automatic access valves & fittings
MV-2215	see Automatic access valves & fittings
MV-2216	see Automatic access valves & fittings
MV-2219	see Automatic access valves & fittings
MV-2220	see Automatic access valves & fittings
MV-2225	see Automatic access valves & fittings
MV-2235	see Automatic access valves & fittings
MV-2243	see Automatic access valves & fittings
MV-2245	see Automatic access valves & fittings
MV-2245	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
MV-2250	see Automatic access valves & fittings
MV-2380	see Automatic access valves & fittings
MV-2500	see Automatic access valves & fittings
MV-2525	see Automatic access valves & fittings
MV-2540	see Automatic access valves & fittings
MV-2541	see Automatic access valves & fittings
MV-2542	see Automatic access valves & fittings
MV-2580	see Automatic access valves & fittings
MV-2594	see Automatic access valves & fittings
MV-2595	see Automatic access valves & fittings

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Part. nr.	Pdf file
SUNISO-4GS-20	see Refrigeration accessories
SUNISO-5G-04	see Refrigeration accessories
SUNISO-SL32-04	see Refrigeration accessories
SUPER-3790	see Refrigeration accessories
SUPER-947	see Refrigeration accessories
SV2W-38/110	see Evacuating and charging equipment
SV2W-38/220	see Evacuating and charging equipment
SV2W-38/627-VRP-110	see Evacuating and charging equipment
SV2W-38/627-VRP-220	see Evacuating and charging equipment
SWM-4D-41	see Tube working tools
T1-04A	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T1-04B	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T1-04C	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T1-06B	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T1-06C	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T1-08C	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T1-08D	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T1-10C	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T1-10D	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T2-04	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T2-05	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T2-06	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T2-08	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T2-10	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T2-12	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3-04A	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3-04B	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3-06B	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3-08D	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3-10D	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3-12E	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-02	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-03	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-04	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-06	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-08	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-10	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-12	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-16	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-S-02	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-S-03	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-S-04	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-S-06	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-S-08	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-S-10	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-S-12	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-S-16	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-S-20	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
T3F-S-24	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
TE-6	see Forged brass & steel fittings "NPT" & "NPT 45" SAE
TAHL-5	see Electronic measurement and control instruments
TB-03	see Tube working tools
TB-06	see Tube working tools
TB-06	see Service manifolds, gauges and charging hoses
TB-16	see Tube working tools
TB-16	see Service manifolds, gauges and charging hoses
TB-364-04	see Tube working tools
TB-364-05/8mm	see Tube working tools
TB-364-05/8mm	see Tube working tools
TB-364-06	see Tube working tools
TB-364-06mm	see Tube working tools
TB-364-08	see Tube working tools
TB-364-10	see Tube working tools
TB-364-10mm	see Tube working tools
TB-364-12	see Tube working tools
TB-364-12/H	see Tube working tools
TB-364-12mm	see Tube working tools
TB-364-15mm	see Tube working tools
TB-364-16mm	see Tube working tools
TC-0316	see Tube working tools
TC-0316-H	see Tube working tools
TC-0328	see Tube working tools
TC-0328-H	see Tube working tools
TC-0432-ZR	see Tube working tools
TC-0432-ZRH	see Tube working tools
TC-0638-R	see Tube working tools
TC-0638-RH	see Tube working tools
TC-1000	see Tube working tools
TC-1000-SP	see Tube working tools
TC-10168-Z	see Tube working tools
TC-10168-ZC	see Tube working tools
TC-1020	see Tube working tools
TC-1050	see Tube working tools
TC-1050-SP	see Tube working tools
TC-127	see Service manifolds, gauges and charging hoses
TC-127	see Tube working tools
TC-2050	see Tube working tools
TC-206	see Tube working tools
TC-274	see Service manifolds, gauges and charging hoses
TC-274	see Service manifolds, gauges and charging hoses
TC-274	see Tube working tools
TC-274	see Service manifolds, gauges and charging hoses
TC-307	see Service manifolds, gauges and charging hoses
TC-307	see Tube working tools
TC-312	see Tube working tools

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Part. nr.	Pdf file
TP19-010	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-012	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-015	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-018	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-022	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-028	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-030	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-035	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-042	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-048	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-054	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-060	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-064	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-070	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-076	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-080	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-089	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-102	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-108	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-114	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-125	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-133	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-140	see Copper tubes, coils & solder fittings (Inch & Metric)
TP19-160	see Copper tubes, coils & solder fittings (Inch & Metric)
TPM-1/V2	see Electronic measurement and control instruments
TPM-2/V2	see Electronic measurement and control instruments
TPM-58	see Electronic measurement and control instruments
TPM-62	see Electronic measurement and control instruments
TR2-00446	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
TR2-00664	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
TR2-00668	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
TR2-00886	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
TRACE2-118	see Refrigeration accessories
TRACE2-3790	see Refrigeration accessories
TRACE2-474	see Refrigeration accessories
TRAX-300	see Refrigeration accessories
TRAX-40	see Refrigeration accessories
TSPM-1/V2	see Electronic measurement and control instruments
TSPM-2/V2	see Electronic measurement and control instruments
TSPM-3	see Electronic measurement and control instruments
TS-RC	see Tube working tools
TS-SC	see Tube working tools
TSMW-10	see Electronic measurement and control instruments
TSMW-2/V2	see Electronic measurement and control instruments
TSMW-30	see Electronic measurement and control instruments
TSMW-35	see Electronic measurement and control instruments
TSMW-35/EXT	see Electronic measurement and control instruments
TT1-001	see Refrigeration accessories
TT2-001	see Refrigeration accessories
TU-041	see Copper tubes, coils & solder fittings (Inch & Metric)
TU-061	see Copper tubes, coils & solder fittings (Inch & Metric)
TU-081	see Copper tubes, coils & solder fittings (Inch & Metric)
TU-101	see Copper tubes, coils & solder fittings (Inch & Metric)
TU-121	see Copper tubes, coils & solder fittings (Inch & Metric)
TU-141	see Copper tubes, coils & solder fittings (Inch & Metric)
TU-161	see Copper tubes, coils & solder fittings (Inch & Metric)
TU-181	see Copper tubes, coils & solder fittings (Inch & Metric)
TU-221	see Copper tubes, coils & solder fittings (Inch & Metric)
TU-261	see Copper tubes, coils & solder fittings (Inch & Metric)
TU-341	see Copper tubes, coils & solder fittings (Inch & Metric)
TU-421	see Copper tubes, coils & solder fittings (Inch & Metric)
TU-501	see Copper tubes, coils & solder fittings (Inch & Metric)
TU-581	see Copper tubes, coils & solder fittings (Inch & Metric)
TU-661	see Copper tubes, coils & solder fittings (Inch & Metric)
TU-661	see Copper tubes, coils & solder fittings (Inch & Metric)
TWM-1/V2	see Electronic measurement and control instruments
TX-9	see Tube working tools
TX-9	see Service manifolds, gauges and charging hoses
U1-03A	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-04A	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-04B	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-04C	see Evacuating and charging equipment
U1-04C	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-04D	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-04M14	see Evacuating and charging equipment
U1-04M14	see Service manifolds, gauges and charging hoses
U1-05A	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-05B	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-05C	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-05D	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-05E	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-05F	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-06B	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-06C	see Evacuating and charging equipment
U1-06C	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-06D	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-06E	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-06M14	see Evacuating and charging equipment
U1-06M14	see Service manifolds, gauges and charging hoses
U1-08A	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-08B	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-08C	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-08D	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-08E	see Forged brass & steel fittings "NPT" & "NPT 45" SAE"
U1-100-S03	see Fluid control components
U1-100-S05	see Fluid control components
U1-100-S06	see Fluid control components

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Part. nr.	Pdf file
VASC-10 mm	see Fluid control components
VASC-11	see Fluid control components
VASC-12 mm	see Fluid control components
VASC-16 mm	see Fluid control components
VASC-18 mm	see Fluid control components
VASC-22 mm	see Fluid control components
VASC-28 mm	see Fluid control components
VASC-35 mm	see Fluid control components
VASC-42 mm	see Fluid control components
VASC-54 mm	see Fluid control components
VASC-82	see Fluid control components
VASC-83	see Fluid control components
VASC-84	see Fluid control components
VASC-85	see Fluid control components
VASC-86	see Fluid control components
VG-10	see Tube working tools
VG-12	see Tube working tools
VG-12ING	see Tube working tools
VG-14	see Tube working tools
VG-14G	see Tube working tools
VG-14I	see Tube working tools
VG-15	see Tube working tools
VG-16	see Tube working tools
VG-17	see Tube working tools
VG-18	see Tube working tools
VG-19	see Tube working tools
VN—05-13/1056/V2	see Refrigeration accessories
VN—10-20/1103/V2	see Refrigeration accessories
VNT—18-30/46/V2	see Refrigeration accessories
VNT—25-40/25/V2	see Refrigeration accessories
VNT—34-45/25/V2	see Refrigeration accessories
VOC-10	see Tube working tools
VOC-10	see Fluid control components
VOC-15	see Tube working tools
VOC-15	see Fluid control components
VOC-18	see Tube working tools
VOC-18	see Fluid control components
VPC-40	see Evacuating and charging equipment
VPF-40	see Evacuating and charging equipment
VT-400	see Evacuating and charging equipment
W3-V-80	see Service manifolds, gauges and charging hoses
WA-1000	see Tube working tools
WB-1	see Tube working tools
WBO-100	see Refrigeration accessories
WBO-100N	see Refrigeration accessories
WBO-120	see Refrigeration accessories
WBO-120N	see Refrigeration accessories
WBO-150R	see Refrigeration accessories
WBO-250	see Refrigeration accessories
WBO-K10	see Refrigeration accessories
WBO-K10N	see Refrigeration accessories
WBO-K12	see Refrigeration accessories
WBO-K12N	see Refrigeration accessories
WBO-K15	see Refrigeration accessories
WBO-K15R	see Refrigeration accessories
WBO-K25	see Refrigeration accessories
WCP-010/230V	see Refrigeration accessories
WCP-020/230V	see Refrigeration accessories
WDT-128-BODY	see Electronic measurement and control instruments
WDT-128C	see Electronic measurement and control instruments
WDT-128R	see Electronic measurement and control instruments
WKL-5	see Tube working tools
WM-80-B	see Service manifolds, gauges and charging hoses
WM-80-R	see Service manifolds, gauges and charging hoses
WPP-9	see Tube working tools
WS-005	see Electronic measurement and control instruments
WS-005-1L-1/4	see Electronic measurement and control instruments
WS-005-1L-5/16	see Electronic measurement and control instruments
WS-005-1L-7/16	see Electronic measurement and control instruments
WS-055	see Electronic measurement and control instruments
WS-150	see Electronic measurement and control instruments
WS-30	see Evacuating and charging equipment
WS-AC	see Electronic measurement and control instruments
WS-AC-EU	see Electronic measurement and control instruments
WS-AC-UK	see Electronic measurement and control instruments
WS-AC-USA	see Electronic measurement and control instruments
WS-ASV	see Electronic measurement and control instruments
WT-389	see Electronic measurement and control instruments
WT-389/P	see Electronic measurement and control instruments
XLD-6050	see Electronic measurement and control instruments
XPC-06M	see Tube working tools
XPC-07I	see Tube working tools
XPC-T	see Tube working tools
ZERICE	see Refrigeration accessories
ZEROL-150-5L	see Refrigeration accessories